An Examination of the Factors That Affect Electronic Communications Between Auditors and Their Clients

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Thesis Abstract

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This study examines the factors that affect electronic communications between auditors and their clients. Although there are many factors that affect these communications, distance, the technological sophistication of the client, the technological sophistication of the auditing firm, and the size of the client were chosen as the four factors to be examined most closely. The responses from sixty-five surveys distributed to auditors in Columbus were used to test whether these four factors affected electronic communications between auditors and their clients. None of these four factors affect electronic communications, but two other factors--no need currently and no perceived value--were found to be possible explanations for why auditors are not communicating electronically.

Advisor's Signature

Advisor's Signature

This thesis is dedicated to my family and friends for their endless support.

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Chapter I

Introduction

The Audit Becomes Less Important

The role of the auditor is constantly changing with the use of computers. Traditionally, working papers were prepared in pencil on columnar paper, but today, many working papers are prepared on portable personal computers carried by the auditor to the client site. When an adjustment is made on computer-based working papers, the changes also flow through to the appropriate lead schedules or adjustment schedules. A change that may have taken a half hour or more to "push through" traditional working papers now takes only a few seconds on the computer.[1]

Computers have made certain aspects of the audit faster, but they have also presented challenges to auditors performing the audit. Many, if not all, of the clients that the auditor visits also use computers. The auditor now needs to be concerned not with testing the internal controls as they relate to employees, but also as they relate to the computer systems. Separation of duties and clearly defined responsibilities are still key factors to ensure a satisfactory internal control structure, but they are not enough. These

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[1] K. Pany and O. Whittington, Auditing (Burr Ridge, Illinois: Irwin, 1994) 178.

traditional control concepts are augmented by controls written into computer programs and built into the computer hardware.[2]

Although the computer has created some challenging problems for professional accountants, it has also broadened their horizons and expanded the range and value of the services they offer.[3] The range of services that the accountant can provide increased in importance as the audit became more and more of a commodity. This means less reliance on audits in the future and more reliance on other services. In order for the public accounting firm to keep its clients and attract new clients, it must distinguish itself from the other firms by keeping fees low and providing other services to its clients.

A survey of managing partners at twenty public accounting firms confirms the decrease in reliance on auditing services at public accounting firms in the future. Auditing services are expected to contribute a smaller percentage of total revenues in 1999 than in 1996. Table 1 shows the percentage of revenues audit services contribute to these twenty firms' total revenues currently and what percent of total revenues audit services are expected to contribute in 1999.[4]

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[2] Pany and Whittington 284.

[3] Pany and Whittington 279.

[4] Mary Ellen Oliverio and Bernard H. Newman, "Auditing In Public Accounting Firms: A Preliminary Look To 1999," The CPA Journal, Feb. 1996: 53.

Table 1

AUDITING NOW AND AT THE END OF 1999 Percentage of Practice (Revenues)		
In Auditing	**Number of Firms Now**	**Anticipated for 1999**
60%	4	0
50 to 59%	4	2
40 to 49%	5	7
30 to 39%	6	9
20 to 29%	1	2
	20	20

(Mary Ellen Oliverio and Bernard H. Newman, "Auditing In Public Accounting Firms: A Preliminary Look To 1999," The CPA Journal, Feb. 1996: 53.)

One way public accounting firms currently try to distinguish themselves from other firms is by the information technology (IT) they use and can provide. When IT started, and involved only data processing and number crunching, accountants were at the forefront. Accountants were one of the first professions to use the earliest spreadsheets. But as IT evolved, accountants have not kept up, and are no longer well known for being on the cutting edge of technology. Accountants are no longer one of the first professions to try new software or hardware. In fact, in a survey published in September 1995, a great many accountants still are not communicating electronically. Fax and traditional mail still remain the most common method of exchanging information.[5]

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[5] "The Pioneers Who Lost Their Way," Accountancy, Sept. 1995: 66.

Public accounting firms are putting information technology to work in their consulting services. As companies look for "easy-to-use accounting systems," accountants have become software consultants, qualified installers, and even re-sellers. This part of the business is now seen as an important source of revenue for public accounting firms. Corley Phillips, president and CEO of Manzanita Software Systems, even suggested that "if you don't embrace the fact that your clients will become computerized, you're likely to lose clients over time and see your practice dwindle."[6]

Serving Clients With Communications Technology

Whether auditors are consulting or performing an audit, they need to serve their clients and must be able to access a wide range of information from many locations and share it with others globally.[7] This is another area where auditors are putting technology to good use. One way auditors keep in touch with their clients is with new communications technology. But the rate of change in communications technology today is so swift that the future is upon us now. In the 1980s, the technology changed so rapidly that many accountants failed to keep up with the advances because they doubted they could justify the expense. Today, most accountants realize they must stay abreast of new technology to make their work more effective and efficient. But most of all, CPAs stay

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[6] Michael Cohn, "Accounting Technology: The First Decade," Accounting Technology, Dec. 1994: 16.

[7] Stanley Zarowin, "Staying In Touch," Journal of Accountancy, Dec. 1995: 55.

abreast of new technology because they know that the new technology will determine whether their firms will have a future.[8]

One of the newest ways that auditors keep in touch with both their clients and their own office is using remote-control software. Remote-control software allows the auditor to dial into a computer in another location via a modem and access anything on the remote computer from the auditor's client location. For instance, if a client needs help using a computerized chart of accounts, the auditor can spend the time to drive out to the client and work on the problem, or the auditor can dial into the client's computer via his modem using remote-control software. Once the auditor has accessed the client's computer, he or she can call up the accounting program the client was having trouble with and work with it as if he or she were sitting right at the client's desk.[9]

Reducing the Price of the Audit

Auditors are already providing newer services to their clients in order to distinguish their firm from the other public accounting firms. But these public accounting firms could also distinguish themselves from the competition by reducing their fees on existing services like the audit. One way to reduce fees on the audit is for a firm to use its technology to its advantage to make the audit more efficient.

Electronic communications is one form of technology that provides a more efficient way of communicating with the client and gathering the data necessary to conduct

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[8] Zarowin 59.

[9] Zarowin 58.

the audit. Rather than taking the time to travel to the client site and gather the data in person, the auditor can request the data needed via e-mail and have the client e-mail the necessary data back to the auditor. To protect the integrity of the data, the auditor could dial directly into the client's computer system and download the information onto his computer. The public accounting firm could also develop software so that when the auditor downloads the information from the client's system, the data would be put into the format the auditor needs it in and save the auditor the time of manipulating the data.

Software developed by the public accounting firm for a client could also help retain clients. If the client were to switch public accounting firms for its audit, the data necessary for the audit would be contained in a format and in software that is of no use to the new auditors. The client will not want to keep reinvesting in new software every time it switches auditors. By informing the client that the software developed by the public accounting firm reduces the fees of the audit, public accounting firms may be able to retain clients.

The Bottom Line

Ultimately, partners in public accounting firms are looking to maximize their profits. To achieve this, public accounting firms are streamlining to operate cost effectively, which is especially important in the "fee earning world of accountancy."[10] Streamlining for an public accounting firm includes cutting costs on all services offered by the firm, including the audit. Electronic communications could help cut these costs.

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[10] Garry Hunt, "Climbing The Information Ladder," Accountancy, Jan. 1994: 57.

Some firms will argue that they have done things a certain way in the past that have worked, so why bother to change. Unless the public accounting firms tackle some key issues, mainly a lack of commitment and a reluctance to change the culture, they will see their demise in the near future.[11]

[11] Hunt 57.

Chapter II

The Factors That Affect Electronic Communications

The factors that affect auditors' use of electronic communications and communication technology vary widely, and differ for various public accounting firms and their clients. One significant factor may be the distance between the auditor's office and the client location if the client is distant. The time spent traveling and the money spent on food and lodging could be cut by the use of electronic communications. The technological sophistication of both the client and the public accounting firm also may be important. The systems of both parties need to have the capabilities to support electronic communications, or electronic communications will not exist. Finally, the size of the client may be a factor that affects whether auditors communicate electronically with their clients. Clients with higher revenues often have an easier time than smaller clients justifying the expense of the newest computer technology.

Distance

Electronic communication makes sending information to the farthest locations of the world much faster, and it can also save companies on long distance charges when using an Internet provider. In the 1980s, electronic communication technology took the

form of local-area networks, which connected people who worked in the same building or in close proximity. E-mail developed within companies to allow employees to communicate with each other. Then international companies developed the ability for employees to e-mail and transmit data to other employees in other states and countries. As multinational corporations became more spread out, the need to communicate and exchange information quickly but cheaply became eminent. The telephone and fax machine were first, and still are, used, but a better more efficient way was developed.

Public accounting firms are also spread all over the world and their employees communicate and exchange information by e-mail. But how often do corporations and the public accounting firms communicate via e-mail or exchange information either via a direct modem link or using an Internet service provider? Distance may have been a factor in multinational corporations setting up electronic communications, and it also may have been a factor for public accounting firms setting up electronic communications. This might logically lead to the conclusion that distance would be a factor in setting up electronic communications between corporations and public accounting firms.

Clients of public accounting firms can be around the corner or 100 miles away. The next logical question to ask would be whether distance makes a difference in the electronic communications between a client and its auditors. If you communicate electronically with a person in your own office, why not communicate electronically with the client that is just around the corner? It would certainly be more efficient to obtain data and information electronically from the client that is 100 miles away, but the integrity of the data and information could be in question. The integrity of the data and information

transmitted electronically from the client around the corner could also be in question. So the issue is really whether the data can be transmitted electronically without the client altering it first.

The auditor could directly dial into the client's computer system and download the information onto his or her computer at his or her desk, but is the audit still the same without the auditor actually being at the client site? If we look at the purpose of an audit, and how the audit is structured, we can determine whether the auditor really needs to be present.

In a financial statement audit, an auditor gathers evidence to provide a high level of assurance that the financial statements follow generally accepted accounting principles, or some other appropriate basis of accounting. The auditor examines the evidence and verifies the accounting records of the client supporting these financial statements. No guidelines are set for how to gather this evidence. As previously stated, the process of gathering evidence has been changing as the use of computers and electronic transactions have become more common at the client. The only guideline established is that the auditor gather sufficient evidence to conclude that the financial statements are presented in accordance with generally accepted accounting principles.[12]

However, there are certain areas of the audit that the auditor needs to be present for, such as verifying that a client's inventory and other assets do exist. But the auditor does not need to be present to gather other evidence that is kept on the client's computers. If the client is very close by, the auditor may prefer to visit the client site because it will

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[12] Pany and Whittington 5-6.

not cost the firm much time or money. If the client is further away, the auditor may choose to gather evidence from his or her office, saving the time of travelling to the client location.

A trade-off then exists between saving time and money and having an auditor at the client site to gather the evidence necessary to perform an audit. If distance is a factor that affects electronic communications between the auditor and the client, then the benefits of saving time and money will outweigh the costs of not having the auditor at the client site to gather the evidence.

Technological Sophistication of the Public accounting firm and the Client

Another factor that might be significant in determining whether auditors and their clients communicate electronically is the sophistication of both entities' computer systems and information systems (IS) departments. The sophistication of the entities could also determine to what extent the two entities communicate with each other electronically.

The sophistication of the client's computer system can be measured by certain factors such as the software used to collect the data necessary to complete the audit and the hardware that the client uses. The software can range from packaged software, such as WordPerfect, Quattro Pro, Microsoft Word, Excel, Access, and Power Point, to software developed by an public accounting firm or software developed by the client. Packaged software is indicative of the least sophisticated computer systems because the client does not have programs tailor-made for its specific needs or the needs of the

auditor. Software designed by an public accounting firm or by the client itself can be programmed for the specific needs of the client or auditor and is not as readily available.

The hardware a client uses includes what is on employees' desks as well as any larger components such as mainframes or network servers used for a particular office location or the entire company. Mainframes still exist in some companies because they are very powerful, have huge memories, and have very fast processors. In the last decade though, the process of downsizing, or "shifting data processing and problem solving from mainframes to smaller computer systems," has occurred.[13] The mainframes are still used in some smaller systems as hosts, but they are slowly being replaced by smaller computers that can complete the same tasks taking up less space.[14] Therefore, if a company still has only a mainframe, it is not very technologically sophisticated.

Minicomputers are another type of large machine that is being replaced, much like the mainframe, with smaller network servers that are just as powerful. More and more businesses are moving processing from larger systems to local area networks (LANs). The move away from the mainframe and minicomputer reflects the onset of a trend to distributed data processing. This trend of moving to LANs has also led to the ability to manipulate data on a PC at an auditor's desk.[15] Therefore, the smaller systems that allow data manipulation at the desktop represent the most sophisticated systems.

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[13] Barry E. Cushing and Marshall B. Romney, Accounting Information Systems (Reading, Massachusetts: Addison-Wesley, 1994) 151.

[14] Cushing and Romney 152.

[15] Cohn 16.

Another indicator of a high level of technological sophistication is the presence of technology support personnel at both the client and the public accounting firm. In an public accounting firm, technological sophistication is measured by the presence of technology support personnel at each office of the public accounting firm. Clients on the other hand often have information systems departments specifically for the purpose of maintaining the management information systems of the company.

Some companies who are even more sophisticated have accounting information systems administrators who specifically maintain the accounting information systems. An accounting information system supports the day-to-day operations of a company by collecting and storing data about an organization's transactions. While a management information system encompasses all data entering a company, an accounting information system concerns financial information and information generated from processing transaction data.[16] Therefore, companies that are more technologically sophisticated have an accounting information systems administrator as well as an information systems department.

One final measure of technological sophistication is the mechanisms that public accounting firms and their clients have to communicate electronically. Modems are used in electronic communications, and the Internet can be used in addition. A more sophisticated public accounting firm or client would have not only modems, but also the capabilities to access the Internet. In addition, the employees of the public accounting firms and clients would need to know how to use Internet or Web browsers. Just having

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[16] Cushing and Romney 14.

the capability to access the Internet is not enough, but rather those using the Internet need to know how to use it to its fullest potential. Knowing how to use different search engines to locate any information needed would be one fundamental process that the auditors would need to be familiar with in order to use the Internet optimally.

We can conclude that in order to communicate electronically, both entities need the software, hardware, and equipment necessary to support such communications. The most technologically sophisticated clients have not only packaged software, but also software developed internally or by their public accounting firms. In addition, these clients have network servers and information systems experts to support electronic communications. The most sophisticated public accounting firms and clients will not only have these characteristics previously mentioned, but also trained employees who know how to communicate electronically using modems and the Internet.

Size of the Client

The size of the client is the final significant factor that affects electronic communications between auditors and their clients. The size of the client may be in some ways connected to the sophistication of the client's computer systems, but this has not been proven. Many smaller computer companies in the Silicon Valley have very sophisticated systems although they are small.

The main significance of the size of the client is the number of offices the client has. If the client has more than one office location, then it is more likely to have a local-area network. By having a local-area network, the client is probably already

communicating electronically internally. If electronic communications capabilities are already present due to the existence of a local-area network, then it follows that electronic communications externally would not involve a great deal more work for the client.

If the client is fairly large, it may also be able to afford larger, more sophisticated computer systems more easily than a smaller client. A small client may only be able to afford Pcs and not the network server to connect the Pcs. Large clients with large revenues can afford the Pcs and the network hardware and software to connect all of them.

Other Factors That May Be Less Significant

Some other factors that may not be related quite as strongly to electronic communications between auditors and their clients are the existence of a national policy regarding electronic communications for the public accounting firm, the level of the auditor in the firm, and the technological sophistication of the auditor.

A national policy regarding electronic communications for the public accounting firms could also affect electronic communications between auditors and their clients. If a firm has a policy which states that the firm's auditors should promote electronic communications, then this firm will be more likely to communicate electronically with some of its clients. Electronic communications will still depend on the technological capabilities of the clients also, but if both the public accounting firm and the client have the capability to communicate electronically, and there is a policy to promote electronic communications, then electronic communications will probably exist.

Several factors regarding each individual auditor can also affect electronic communications between the auditor and clients. The level of the auditor could be a factor affecting electronic communications. Auditors at the staff level may communicate electronically more than auditors at other levels because they generally gather more of the information needed for the audit. The opportunity to obtain this information electronically would be more likely for a staff level auditor. Partners may communicate electronically with their clients, but more likely it would be via e-mail and would not involve as much information.

The auditors' technological sophistication may also be a factor affecting electronic communications. As mentioned earlier, having the capability to communicate electronically is not enough for electronic communications to exist. No matter what level the auditor, if the auditor is not proficient in using the software and hardware necessary to communicate electronically with his or her clients, electronic communications probably will not exist.

Summary

There are many factors that may affect electronic communications between auditors and their clients, and only a few are touched upon in this study. I chose to look most closely at the factors that would seem to have a direct effect on electronic communications between auditors and their clients. The purpose of this study then is to determine whether these factors really do affect electronic communications.

Chapter III

Hypothesis and Questionnaire Development

Hypothesis Development

Once the significant factors that are believed to affect electronic communications between auditors and their clients had been identified, four hypotheses were formed relating to these significant factors--distance, sophistication of the client, sophistication of the public accounting firm, and size of the client. Questions were developed in order to test these hypotheses with certainty. Exhibit 3 in Appendix A shows each hypothesis with the questions from the survey that relate directly to each hypothesis.

Hypothesis 1: The distance between the auditor's office and the client location affects whether an auditor will communicate electronically with the client.

In order to determine whether distance is a factor that affects electronic communications, certain questions relating to electronic communications and distance were included on the questionnaire. First, a question relating to the distance between the auditor's office and the client location the auditor visited most (Question 8) was asked. The respondent was given the choices of ≤45 miles or >45 miles. In the questionnaire, 45 miles was chosen because that would be approximately 1 hour of driving time for an auditor leaving a Columbus office. When clients are further away than 45 miles or one

hour, and the auditor is performing work at the client site for two or more consecutive days, then the auditor must consider obtaining lodging near the client location. The question of whether the auditor communicated electronically with the client (Question 9, part 1) was also asked. These two questions together give us an idea of the relationship between distance and electronic communications.

Questions 39 and 43 also related to distance and electronic communications. These two questions gauged the auditor's opinion of whether distance was a factor that affected electronic communications. Question 39 listed a number of factors that the auditor or firm may have considered when deciding to communicate electronically with a client. Distance was one of the factors listed in this question. Question 43 directly asked whether the auditor feels distance is a factor in deciding whether to communicate electronically.

By determining whether the auditor communicates electronically with clients and how far away these clients' locations are, we can determine whether a relationship exists between distance and electronic communications. Since some auditors may not be communicating electronically with their clients, question 43 asks their opinion as to whether they feel distance is a factor in communicating electronically. This question can be answered by any auditor, regardless of whether they communicate electronically with their clients or not.

Hypothesis 2: The technological sophistication of a client affects whether it will communicate electronically with its auditors.

In order to find a connection between electronic communications and the sophistication of a client, questions regarding whether electronic communications take place and how sophisticated the client is were asked. Part 1 of question 9, "Does this client communicate with you electronically?" again was used to determine whether the auditor communicated electronically with the client.

Questions asked to ascertain the sophistication of the client addressed issues such as the types of software and hardware used by the client, mechanisms the client has to communicate electronically, and the support staff the client has for its systems. Question 1 relates to the software used by the client to collect the data needed for the audit. Question 2 determines the different types of hardware the client uses. Question 3 determines what means the client has to communicate electronically with the auditor. Questions 4 and 5 determine how much systems support staff exists at the client. Question 4 determines if there is a general information systems department, and question 5 is more specific, asking if there is an accounting information systems administrator at the client.

Questions 39 and 40 again obtain the auditor's opinion of which factors are important in making the decision to communicate electronically with clients. Technological capabilities of the client is one factor the auditor was asked to rank as to how important it was in deciding to communicate electronically with clients. The auditor was asked to rank the same factor in relation to how important it was in deciding to not communicate electronically with clients.

Hypothesis 3: The technological sophistication of the public accounting firm affects whether it will communicate electronically with its clients.

This hypothesis is tested by ascertaining whether the auditor communicates electronically with clients and the sophistication of the systems to which the auditor has access. The sophistication of the public accounting firm is measured much like the sophistication of a client. Factors such as whether a technology support specialist is available to the auditor (question 31), whether there is a firm wide policy regarding electronic communications (question 32), how proficient the auditor is in using Internet browsers and e-mail (question 38), and whether the auditor feels his or her firm is technologically capable to communicate with its clients (question 42) were all addressed to measure the sophistication of the public accounting firm. Questions 39 and 40 addressed the auditor's opinion of the firm's technological capabilities and whether they were an important factor in deciding to communicate electronically with clients.

Hypothesis 4: The size of the client affects whether the client and the auditor will communicate electronically.

To determine whether the size of the client is a factor in deciding to communicate electronically, questions regarding the size of the client and whether the auditor communicated with the client electronically were asked. The size of the client was determined by asking the annual revenues of the client, the extent of the client's system support staff (questions 4 and 5), and whether the client had more than one office location (question 7). Question 39 and 40 again obtained the auditor's opinion as to whether the

size of the client makes a difference in making the decision to communicate electronically with the client.

Questionnaire Development

The questionnaire was divided into two sections. The first section asked the respondent to answer questions regarding the three clients that the auditor spent the most time on. Questions 1 through 10 were directed specifically towards the first client, and these same ten questions were repeated in the sections labeled "Client #2" (questions 11 through 20), and "Client #3" (questions 21 through 30). Most of the questions about the clients were answered by checking "yes," "no," or "don't know." Some questions asked the respondent to check one or several choices from a list.

The second section asked for information about the respondent and the firm the respondent was currently working for. These questions also involved choosing the appropriate answer from a list of choices, choosing "yes," "no," or "don't know," and rating certain items or statements on a scale from 1 to 5 or 1 to 7. Question 38, which asked the respondent to rate his or her proficiency using certain types of computer programs, was given a scale from 1 to 5, "not proficient" to "very proficient" respectively. Questions 39 and 40 were given a scale from 1 to 7 because the respondent was rating the factors affecting electronic communications on a different scale, this time ranging from "not important" to "very important." Questions 41 through 43 then had a different rating system, "strongly disagree" to "strongly agree," so the scale went back to 1 to 5. In total, forty-three questions were asked. The order of the questions was arbitrary, although in

the general information section, questions about the firm's technology were first grouped together, and then questions about the respondent and his opinions followed.

Before sending out the survey, I consulted Sheri Bartlome, the human resources director at Price Waterhouse LLP in Columbus, Ohio, to give me suggestions for the cover letter and survey. The name of each client was one item that she said the respondent probably would not disclose. I added a statement in the cover letter explaining to the respondent to fill out the rest of the survey and leave the "Name" lines blank if he did not feel comfortable disclosing the names of the clients.

A total of 395 surveys were distributed in Columbus, Ohio to seven public accounting firms. These offices were chosen for their accessibility. The questionnaires were delivered to the human resources coordinator in six of the offices and the partner-in-charge in one office. The questionnaires were then placed in the mailboxes of all the audit professionals from staff through partner in the respective offices. Each questionnaire also included a cover letter with instructions and a postage-paid envelope to return the survey.

The surveys were distributed to auditors rather than tax or consulting professionals for a few reasons. First, the auditors finished their busy season in March and were therefore not as busy in May. Second, tax professionals often obtain much of their information needed to prepare tax returns from the auditors. Finally, the auditors provided a larger population than the tax or consulting professionals.

Enough surveys were delivered for each audit professional in each firm to have a survey. Thirty surveys were delivered to Firm A, sixty to Firm B, one hundred ten to Firm C, sixty to Firm D, seventy to Firm E, thirty-five to Firm F, and thirty to Firm G. Each

firm received a different colored survey so that comparisons could be made between the firms, but still allow the responses to remain anonymous. In Appendix A, Exhibit 1 displays the cover letter sent with the survey, and Exhibit 2 displays the survey that was given to each audit professional.

Chapter IV

Testing of the Hypotheses

In total, 65 of the 395 (16%) surveys were returned. The number of surveys returned from each firm are as follows: Firm A-six of 30 (20%), Firm B-eight of 60 (13%), Firm C-fifteen of 110 (14%), Firm D-seven of 60 (11%), Firm E-thirteen of 70 (19%), Firm F-four of 35 (11%), and Firm G-twelve of 30 (40%). Of the sixty-five respondents, fourteen (22%) were staff level accountants, seventeen (26%) were seniors, twenty-five (38%) were managers, and nine (14%) were partners. Forty-five (69%) of the respondents were male, and twenty (31%) were female.

All of the information needed for the testing of the hypotheses can be found in Appendix B. Exhibit 1 shows the responses from the 65 surveys that were returned. Exhibit 2 shows the results of the tests relating to hypothesis 1, Exhibit 3 shows the results for hypothesis 2, Exhibit 4 shows the results for hypothesis 3, and Exhibit 5 shows the results for hypothesis 4.

Each answer from the surveys was coded when entered into a data file. For questions 1, 2, 3, and 9 (part 3), where more than one choice could be checked, a "0" indicates that the respondent did not check the choice, and a "1" indicates that the respondent did check the choice. For example, if the respondent had checked "Software

developed by your firm" under question 1, then there would be a "1" in the column labelled Q1A. If the respondent did not check that choice, there would be a "0."

For the questions where there were several choices but only one choice could be checked to answer the question, the first choice was coded "1," the second choice was coded "2," and so on. For example, for questions that had "yes," "no," or "don't know" as answer choices, yes was coded "1," no was coded "2," and don't know was coded "3." A "." indicates that the respondent did not answer the question.

Hypothesis 1: The distance between the auditor's office and the client location affects whether an auditor will communicate electronically with the client.

Hypothesis 1 deals with the distance between an auditor's office and the client location. If there is a relationship between distance and electronic communications, it would be expected that the further away the client, the more likely it is that an auditor would communicate electronically with that client.

There were four questions included in the survey that addressed this hypothesis. Questions 8, 18, and 28 (question 8) asked how far the auditor's office was located from the location of the client that the auditor visited most often. These three questions were identical in wording and simply referred to three separate clients. Therefore, the responses to these three questions were grouped together and referred to as Q8. Part 1 of questions 9, 19, and 29 (question 9, part 1) asked whether the client communicated electronically with the auditor. Again, because these three questions were identical, the responses from these three questions were grouped together as Q9P1.

Question 39 dealt with auditors and the clients the auditor communicated with electronically. It asked how important the auditor felt several factors were in deciding to communicate electronically with clients. Question 43 asked the auditor whether he disagreed or agreed with the statement "Distance is a factor in deciding whether to communicate electronically with a client." A scale from 1 to 5 was used for question 43, with 1 equalling "strongly disagree" and 5 equalling "strongly agree."

In order to test question 8 and question 9, part 1, a t-test or chi-square test could be used. There were 15 "yes" answers for question 9, part 1, and 168 "no" answers for the same question, thus the sample sizes were not similar. The sample sizes need to be similar in order for the t-test to be used, so the chi-square test was used instead. A chi-square test can be performed on independent samples of data that are at least nominally scaled. All of the data in this study is at least nominally scaled, such as the responses to question 9, part 1, or ordinally or intervally scaled, such as the responses to question 8. Although questions 8, 18, and 28 were all answered by the same auditor, they are considered independent of each other because they relate to three different clients.

When using a chi-square test, both null and alternative hypotheses are formulated. The null hypothesis states that the two variables being tested are independent of one another. The alternative hypothesis states the opposite, that the two variables are not independent of one another. The null hypothesis is always assumed true until there is enough evidence to reject it.

The evidence needed to reject the null hypothesis is a large chi-square statistic and a small p-value.[17] A large chi-square statistic indicates that the observed results are far from the expected results, and small chi-square statistics are the opposite. If the observed and expected results are far apart, there is less independence between the two variables being tested. The p-value tells us the chance of getting a larger chi-square statistic than the one that was calculated. Thus, if the p-value is .02, there is only a 2% chance of obtaining a higher chi-square statistic. A p-value of .05 or less is generally required to reject the null hypothesis.[18]

The null hypothesis for this chi-square test is that the two variables, question 8, and question 9, part 1, are statistically independent. In other words, the distance from the auditor's office to the client location and whether the auditor communicates electronically with the client are independent of one another. The alternative hypothesis therefore states that the two variables are not statistically independent.

On the left side of the chi-square in Exhibit 2 of Appendix B are the responses to question 8. They are coded as follows: 1= ≤45 miles and 2= >45 miles. Along the top of the chi-square are the responses to question 9, part 1, where 1=yes and 2=no. The first line in each square contains the actual observation. For example, if we look at the clients who are less than or equal to 45 miles away, 9 communicate electronically and 112 do not. The second line contains the expected values, and for the same example, 9.92 clients were expected to communicate electronically and 111.08 clients were not expected to

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[17] Kenneth R. Hammond, James E. Householder, and N. John Castellan, Jr., Introduction To The Statistical Method, (New York: Albert A. Knopf, Inc., 1970) 338.

[18] David Freedman et. al., Statistics, Second Edition, (New York: W W Norton & Company, 1991) 477.

communicate electronically. Although sixty-five surveys were returned, with a total of 195 clients, information on only 183 clients was collected. This is due to the fact that a few respondents only answered the questions relating to clients one and two. One respondent answered questions relating to client one only.

The differences between the actual values and the expected values were then used to calculate the chi-square value and a p-value. The chi-square statistic for questions 8 and 9 is .273. This is a very small chi-square statistic, meaning the actual and expected values were very close together. The corresponding p-value is .601. Since a p-value of .05 or less is usually required to reject the null hypothesis and accept the alternative hypothesis, we cannot reject the null hypothesis. Therefore, the distance between an auditor's office and the client location and whether the auditor communicates with that client electronically are statistically independent.

Question 39, part A asked for the auditor's opinion as to how important distance was in deciding to communicate electronically with clients. Since this was the auditor's opinion, the mean of the responses given was found in order to give us an idea of how the auditors in the study felt. Question 39 was only answered by auditors who currently communicate electronically with their clients, which could include clients other than the first three the auditors had answered questions about.

There were only twenty-one responses to this question, but the mean of these responses still may give us an idea of whether these auditors who do communicate electronically with their clients considered distance to be an important factor when deciding to communicate electronically. The following table shows the distribution of responses given to question 39, part A.

Response	Frequency
1	2
2	5
3	4
4	2
5	4
6	3
7	1

The mean of the responses was 3.67 with a standard deviation of 1.80. The scale the auditor used to answer the question had a minimum value of 1 (not important) and a maximum value of 7 (very important.) This mean indicates that the auditors felt that distance was somewhat important in the decision to communicate electronically with clients, but certainly not very important. This is confirmed by the fact that half of the respondents rated this factor 1, 2, or 3 on the scale of 1 to 7. The respondents may feel that distance is not a factor because the clients they communicate with electronically are not very far away. Of the 15 clients in this study that auditors communicate with electronically, 10 are located within 45 miles of the auditor's office, and 5 are located farther than 45 miles away from the auditors office.

Question 43 also asked for the opinion of all auditors regardless of whether they communicated electronically or not. The respondents were given a scale from one to five, with 1 equalling "strongly disagree" and 5 equalling "strongly agree" to rate the statement

"Distance is a factor in deciding whether to communicate electronically with a client." The following table shows the distribution of the response given to question 43.

Responses	Frequency
1	21
2	10
3	22
4	9
5	1

The mean was again used to give us an idea of how auditors felt distance might affect the decision to communicate electronically with clients. The mean of the responses to question 43 was 2.35 with a standard deviation of 1.14. The distribution tells us the most, since only 10 of the 63 respondents who answered this question agreed even slightly with this statement.

By taking the results from the chi-square test of question 8 and question 9, part 1, and the distribution of the responses from question 39, part A and question 43, we can determine that distance does not have an effect on whether an auditor communicates electronically.

Hypothesis 2: The technological sophistication of a client affects whether it will communicate electronically with its auditors.

Hypothesis 2 attempts to find a relationship between the technological sophistication of the client and electronic communications with the auditor. There are several indicators of technological sophistication, such as the software and hardware the

client uses and the extent of technology support available to the client. Part 1 of questions 9, 19, and 29 (question 9, part 1) asks the critical question of whether the auditor communicates electronically with the client.

Questions 1, 11, and 21 (question 1) were included in the questionnaire to obtain information about the type of software the client uses to produce the data needed to conduct an audit. Questions 2, 12, and 22 (question 2) asked about the type of hardware the client currently has. Questions 3, 13, and 23 (question 3) determined what mechanisms the client has to communicate electronically with the auditor. Questions 4, 14, and 24 (question 4) asked whether the client has an Information Systems Department, and questions 5, 15, and 25 (question 5) determined whether the client has an Accounting Information Systems Administrator. Part 3 of question 9, 19, and 29 (question 9, part 3) determined what mechanism the client uses to communicate electronically with the auditor.

Question 39 was asked to determine the auditors' feelings of whether the technological capabilities of the client were an important factor in deciding to communicate electronically with clients. As with the testing of hypothesis 1, only those auditors who currently communicate electronically with their clients were able to answer question 39. Question 40 addresses the factors that affect the decision to not communicate electronically with a client, therefore most of the auditors should have been able to answer this question.

The testing of hypothesis 2 was very similar to the testing of hypothesis 1. A chi-square test was used to show the relationship between question 9, part 1 and questions 1,

2, 3, 4, 5, and 9, part 3. Questions 1, 2, 3, and 9, part 3 all had several choices for the auditor to check, so each separate choice was related to question 9, part 1. For instance, question 1, which asked about the types of software used at the client, had the choices "Software developed by your firm," "Software developed by the client," "Packaged software," and "Don't know." If the respondent checked "Software developed by the firm," the response was recorded in Q1A, and responses to "Software developed by the client" were recorded as Q1B. Each separate choice, Q1A, Q1B, Q1C, etc. was then related to question 9, part 1 using the chi-square test. Again, a t-test could not be used because the sample sizes for question 9, part 1 were not similar.

Software

Chi-square tests were first run for the different types of software. The null hypothesis states that the type of software the client uses and whether the auditor communicates electronically are independent. The alternative hypothesis is that the type of software and electronic communications are not independent. The following table summarizes the result of each different type of software.

Type of Software	Chi-Square Statistic	P-Value
Software developed by your firm (Q1A)	1.258	.262
Software developed by the client (Q1B)	1.831	.176
Packaged software (Q1C)	.317	.573

Because the chi-square statistics are so small, and the p-values are greater than .05, all of these types of software are independent with respect to electronic communications.

Hardware

The next chi-square test determined whether the type of hardware the client has currently (question 2) is independent of whether the client communicates electronically with the client (question 9, part 1). The null hypothesis states that the type of hardware the client has and electronic communications are independent. The alternative hypothesis states that the type of hardware and electronic communications are not independent. The following table summarizes the results of these chi-square tests.

Type of Hardware	Chi-Square Statistic	P-Value
Pcs	.008	.927
Minis/UNIX workstations	.601	.438
Mainframes	.001	.979
Network servers	4.632	.031

Of the different types of hardware a client might have, Pcs, Minis/UNIX workstations, and mainframes are independent of electronic communications. Network servers and electronic communications are not independent of each other. Network servers usually indicate the existence of a local-area network, where internal electronic communications would exist. This increases the chance of external communications, and thus it is not surprising to find that network servers and electronic communications are not independent.

With Pcs, Minis/UNIX workstations, and mainframes, we cannot reject the null hypothesis that each of these types of hardware are independent of electronic communications. By looking at the four chi-square tests together, we cannot reject the null hypothesis and accept the alternative hypothesis that the type of hardware the client has and electronic communications are not independent. Therefore, the type of hardware and electronic communications are independent.

Mechanisms The Clients Possesses To Communicate Electronically

The next factor tested was the mechanism the client has to communicate with the auditor electronically (question 3). A summary of the modes of communication of the 182 clients are contained in the following table.

Mechanism	Frequency
Modem	70
The Internet	25
None	94
Don't know	11

For the chi-square tests for this hypothesis, the null hypothesis states that the mechanism a client has to communicate electronically is independent of electronic communications. The alternative hypothesis states that the mechanism a client has to communicate electronically is not independent of electronic communications. The following table summarizes the results of these chi-square tests.

Type of Mechanism to Communicate Electronically	Chi-Square Statistic	P-Value
Modem	5.495	.019
The Internet	60.576	.000
None	17.462	.000

All of these chi-square tests allow us to reject the null hypothesis that the mechanism the client has to communicate with its auditor is independent of electronic communications. Especially impressive are the p-values for "The Internet" and "none" and their relationship to electronic communications. This would be expected because most companies would not purchase modes of communication and then not use them.

Technical Support

The next two chi-square tests deal with the relationship between the client having an Information Systems Department (question 4) or an Accounting Information Systems Administrator (question 5) and whether the auditor communicates electronically with the client (question 9). The null hypothesis for the chi-square test for question 4 and question 9, part 1 states that the client having an Information Systems Department and electronic communications are independent. The alternative hypothesis states that the client having an Information Systems Department and electronic communications are not independent. The null hypothesis and alternative hypothesis for the chi-square test for question 5 and question 9, part 1 are the same, except the relationship is between an Accounting Information Systems Administrator and electronic communications.

In the case of an Information Systems Department and electronic communications, the null hypothesis cannot be rejected because the chi-square statistic is 1.593 and the p-value is .451. Very similar results are obtained with an Accounting Information Systems Administrator and electronic communications, where the chi-square statistic is 1.795 and the p-value is .408. Therefore, we can determine that electronic communications are independent of the presence of an Information Systems Department or Accounting Information Systems Administrator at the client.

Mechanisms The Client Uses To Communicate Electronically With The Auditor

The final chi-square test involves the mechanism by which auditors communicate electronically with clients (question 9, part 3) and electronic communications (question 9, part 1). The respondent only answered question 9, part 3 if he or she answered yes to "Does this client communicate with you electronically?" Because there were only 15 "yes" answers to question 9, part 1, the sample size is too small for the chi-square test to be valid for this relationship.

Accept Or Reject Hypothesis 2

We can pull all of the results of these chi-square tests together to determine whether to accept or reject hypothesis 2. Many of the factors considered for this hypothesis were found to be independent of electronic communications. Because only a few factors--network servers and the mechanisms used to communicate electronically--were found to not be independent, we cannot accept hypothesis 2.

Questions 39 and 40 may give us a better idea of how important auditors feel the technological capabilities of the client are with regards to electronic communications. Question 39, part C was answered by auditors who do communicate electronically with clients, so only 21 responses were collected. The respondents were asked to rate how important the technological capabilities of the clients were in deciding to communicate electronically with clients on a scale from 1 (not important) to 7 (very important). The mean of these responses was 5.38 with a standard deviation of 1.72. 17 of the 21 respondents rated this factor 5 or higher. This shows that auditors do feel the technological capabilities of the client are an important factor in deciding whether to communicate electronically with a client.

Question 40, part C deals with how important certain factors are in deciding to not communicate electronically with clients. Again, a scale from 1 (not important) to 7 (very important) was provided for the respondent to rate the importance of this factor. The mean of these responses was 4.98 with a standard deviation of 2.09. The distribution on this question was similar to that of question 39. 30 of the 56 auditors who answered this question rated the factor with a 6 or 7. There were also 9 respondents who rated this factor a 1. It appears as if the auditors feel very strongly both ways, but with a majority feeling that the technological capabilities of the client were very important in deciding to not communicate electronically.

Hypothesis 3: The technological sophistication of the public accounting firm affects whether it will communicate electronically with its clients.

While hypothesis 2 looks at electronic communications and their relationship to the clients' technological sophistication, hypothesis 3 looks at the relationship between electronic communications and the level of technological sophistication of the public accounting firm.

Responses to part one of questions 9, 19, and 29 (question 9, part 1) were used in chi-square tests with the responses from questions 31 and 32. Question 31 asked whether the auditor has a technology support specialist available to him in his office. Question 32 asked if there is a firm wide policy regarding electronic communications with clients.

For the first chi-square test performed with question 9, part 1 and question 31, the null hypothesis states that the availability of a technology support specialist to the auditor and electronic communications are independent. The alternative hypothesis states that the availability of a technology support specialist to the auditor and electronic communications are not independent. This chi-square test showed that every respondent answered "yes" to question 31. In other words, every respondent indicated that they have a technology support specialist available to them in their office. The expected and actual results were exactly the same, so we must accept the null hypothesis that the availability of a technology support specialist to the auditor and electronic communications are independent of each other.

The second chi-square test was performed with question 9, part 1 and question 32. The null hypothesis states that a firm wide policy regarding electronic communications

with clients (question 32) and electronic communications (question 9, part 1) are independent. The alternative hypothesis states that a firm wide policy regarding electronic communications with clients and electronic communications are not independent. The chi-square statistic for this test is 2.199 and the p-value is .333. This p-value does not show significance, therefore, we cannot reject the null hypothesis and accept the alternative hypothesis. A firm wide policy regarding electronic communications with clients and electronic communications are independent.

Questions 39, 40, and 42 may help confirm these suspicions of independence by revealing the auditor's feelings of how important the technological capabilities of his or her firm are in deciding whether to communicate electronically. Question 39, part D asked how important the technological capabilities of the auditor's firm were in deciding to communicate electronically. Only 21 of the 65 respondents answered this question, and the mean was 5.05, with a standard deviation of 1.63. This shows that with regards to the clients he or she currently does communicate with electronically, the auditor felt the accounting firms' technological capabilities were somewhat important in making the decision to communicate electronically.

Question 40, part D asked whether the technological capabilities of the auditor's firm were important in making the decision to not communicate electronically with clients. The mean response to this question was 3.18 with a standard deviation of 2.23. The following table summarizes the distribution of the responses to question 40, part D.

Response	Frequency
1	22
2	7
3	3
4	5
5	6
6	8
7	5

From this distribution, we can see that more auditors feel that the technological capabilities of their firms were not a factor in deciding to not communicate electronically. But there are still quite a few respondents who feel their firms are not technologically capable of sustaining electronic communications.

Question 42 tells a different story from question 40 though. Question 42 asked the auditors how strongly they disagreed or agreed with the statement "Your firm has the capability to communicate electronically with your clients." The respondents rated this statement on a scale from 1 (strongly disagree) to 5 (strongly agree). The mean of the responses was 4.44 with a standard deviation of .91. This means that most of the auditors that answered this question feel confident that their firms have the technological capabilities to communicate electronically with their clients. Perhaps the respondents did not understand what was being asked in question 40, hence the wide distribution of responses.

Question 38 asked about the auditor's proficiency in using certain computer programs. An public accounting firm may have all of the latest communications technology, but if no one knows how to use it, then it is of no use. Part A of question 38 asked the auditors how proficient they are at using Internet browsers on a scale from 1 (not proficient) to 5 (very proficient). The mean of these responses was 2.18, and 83% of the respondents rated themselves 3 or lower. The auditors e-mail skills are slightly better, with a mean of 3.85, but they still are not experts at using either program. Perhaps more training needs to be done at the public accounting firms to get the auditors ready for communicating electronically.

The results of the chi-square tests indicate that the technological sophistication of an public accounting firm is independent of electronic communications, but according to the responses to question 42, the auditors feel strongly that their firms are capable of communicating electronically. Whether the auditors are capable enough to communicate electronically is not certain. Perhaps as more auditors and their clients communicate electronically, the relationship will become more clear.

Hypothesis 4: The size of the client affects whether the client and the auditor will communicate electronically.

Hypothesis 4 was tested by including questions relating to the size of the auditors' clients on the questionnaire. First, the auditors were asked to provide the annual revenues for each of the three clients in the first portion of the survey. Unfortunately, there were not enough responses for this item on the questionnaires. The first line for each client

asked for the client name, industry, and annual revenues. In the cover letter, the respondent was told that he could leave the "name" item blank if that information was confidential, but many respondents left all three items on that line blank instead.

The remaining questions used to test this hypothesis were questions 4, 14, and 24 (question 4), questions 5, 15, and 25 (question 5), questions 7, 17, and 27 (question 7), and part 1 of questions 9, 19, and 29 (question 9, part 1). Question 4 asked if the client has an Information Systems department, question 5 asked if the client has an Accounting Information Systems Administrator, question 7 asked if the client has more than one office location, and question 9, part 1 asked if the client communicated electronically with the auditor.

Chi-square tests were used to relate questions 4, 5, and 7 to question 9, part 1. The following table shows the chi-square statistics and p-values for each of the three chi-square tests.

Question	Chi-Square Statistic	P-Value
4	1.593	.451
5	1.795	.408
7	.328	.567

The chi-square tests for question 4 and question 9, part 1 and for question 5 and question 9, part 1 were also used to test hypothesis 2. The null and alternative hypotheses remain the same for testing this hypothesis. Again, the p-values are high enough that there is not enough evidence to reject the null hypothesis and accept the alternative hypothesis. We therefore have to assume that electronic communications are independent of the

existence of an Information Systems Department or an Accounting Information Systems Administrator at the client.

The chi-square test for question 7 and question 9, part 1 also showed a small chi-square statistic and large p-value, therefore not giving us enough reason to reject the null hypothesis. The null hypothesis in this case is that a client that has more than one office location is independent of electronic communications. The alternative hypothesis states that a client that has more than one office location is not independent of electronic communications.

Questions 39 and 40 again were used to try to get an idea of how important the auditors felt the size of the client was in deciding whether to communicate electronically. The mean response to question 39, part C was 3.33 with a standard deviation of 1.88. The respondents rated the importance of the size of the client on a scale from 1 (not important) to 7 (very important) with regard to the decision to communicate electronically and the responses were fairly evenly distributed. The mean of these responses shows that the auditors do not feel the size of the client is very important, and confirms the results of the chi-square tests.

The mean response to question 40, part C, the importance of the size of the client in deciding to not communicate electronically, was 3.22 with a standard deviation of 2.16. 18 of the 55 respondents who answered this question rated this factor a 1 on the scale from 1 (not important) to 7 (very important). The rest of the respondents were distributed very evenly over the rest of the ratings.

Question 41 also asked the auditors how strongly they disagreed or agreed with the statement "Your larger clients have the capability to communicate electronically while your smaller clients do not." The auditors rated this statement on a scale from 1 (strongly disagree) to 5 (strongly agree). A majority of the respondents rated this statement 2, 3, or 4, indicating a lack of strong feeling on this issue. The mean response to this question was 3.13 with a standard deviation of 1.21. The auditors do not really feel strongly either way about this statement.

With the results of the chi-square tests and the support of questions 39, 40, and 41, we can reject the hypothesis that the size of the client affects whether the client and the auditor will communicate electronically.

Chapter V

Conclusion

The purpose of this study was to examine the factors that affect electronic communications between auditors and their clients. Studies have been done before focusing on the technology of corporations and their use of electronic communications, but not many people have looked at the issue from the perspective of the auditor, making this study unique.

While this study could have looked at several factors affecting electronic communications, it was narrowed to four factors that were felt to be the most significant. Distance, the technological sophistication of the client, the technological sophistication of the public accounting firm, and the size of the client were the four final choices to test. Once the testing of the hypotheses was finished, it was determined that none of these four factors affected electronic communications between auditors and their clients.

But this study looked only at four factors, and perhaps there were other factors that would have been better to examine. The comments the respondents made on the surveys may provide some insight into some of the more pertinent factors.

Question 40, which asked the auditor to rate how important several factors were in deciding to not communicate electronically, had the most comments. All of the

respondents rated the five factors given, but a few also filled in the blank next to "other" and rated a sixth factor. One common theme among the comments was that there is currently not a need for electronic communications with clients at this time. Many respondents who rated the sixth factor filled in "not much need at this time," or something similar. One respondent even stated that she felt there was "no real benefit perceived by [the public accounting firm] or the client." And yet another respondent wrote that he "hadn't seriously considered it." For some auditors, the methods of communication they currently use are good enough for them and their clients.

Another theme throughout the comments to question 40 related to the fact that electronic communications can be very impersonal. One respondent stated he "needed 'face' time with the client to develop a relationship." Another respondent wrote that "phones are more personal."

While computers and electronic communications are making our lives easier, we sometimes lose sight of the fact that personal contact is sometimes necessary when communicating with someone. Electronic communications do not allow you to see the expression on someone else's face or to hear the inflection or questioning tone in another person's voice. These elements are sometimes necessary to get your point across, and some auditors believe that electronic communications simply are not personal enough. This may be one underlying reason why the public accounting firms and their clients feel there is not a need for or value in electronic communications.

We may have found a few reasons why many auditors do not communicate electronically, but what about the factors that do influence the decision to communicate

electronically. Question 39 was similar to question 40 but was directed towards those auditors who already communicate electronically with their clients. Here again, respondents who rated the "other" factor may provide some insight. One respondent filled in "cost" as a reason to communicate electronically. "Ease of use" was another reason stated by a manager for communicating electronically.

There were fewer comments to question 39 than to question 40, and the comments given were not related to each other in any way. Part of the reason for the lack of comments on question 39 was that only 21 of the 65 respondents were able to answer question 39. Perhaps as more auditors begin to communicate electronically, and the same study is done again, more reasons for communicating electronically will be found.

We can also look at the factors that the auditors were asked to rate in questions 39 and 40 to see which factors they felt were more important than others in deciding whether to communicate electronically. The following tables list the factors in order of importance in the deciding whether to communicate electronically. The factors were rated on a scale of 1 (not important) to 7 (very important).

Question 39-Factors That Affected The Decision To Communicate Electronically

Factor	Mean
Technological capabilities of the client	5.38
Technological capabilities of your firm	5.05
Reliability	3.95
Distance	3.67
Size of the client	3.33

Question 40-Factors That Affected The Decision To Not Communicate Electronically

Factor	Mean
Technological capabilities of the client	4.98
Security	3.40
Reliability	3.22
Size of the client	3.22
Technological capabilities of your firm	3.18

For those auditors that do communicate electronically, the technological capabilities of both the client and the public accounting firm were more important than any other factors in deciding to communicate electronically. For those auditors who decided to not communicate electronically with a client or clients, the technological capabilities of the client were again an important factor in the decision to not communicate electronically, and there was not much difference in importance of the other four factors.

At the present time, only one-third of the auditors that responded to the survey communicate electronically. For the other two-thirds who are not communicating electronically, there seems to not be a need to communicate electronically. The purpose of this study was to examine the factors that affect electronic communications between auditors and their clients. The four factors that were examined most closely appeared to not affect electronic communications. Whereas these four factors were not found to be significant, we may have found a few factors that are significant.

The auditors that responded to this survey felt for the most part that their public accounting firms currently possess the technology needed to communicate electronically.

But these auditors' clients may not be ready technologically for electronic communications yet. A promising statistic in the area of technological sophistication is that the number of executives who say they will increase spending on computer hardware and software has more than doubled in the past five years.[19] Perhaps in the next five years, these same auditors' clients will be better equipped to communicate electronically.

But even if the public accounting firms and their clients are capable of communicating electronically with each other, they still may use the same forms of communication they have always used. Only once the public accounting firm and the client both see that there is a need to communicate electronically and that there is some value in this form of communication will both parties be willing to communicate electronically. Until that time, the telephone, fax machine, and postal service will serve as the public accounting firms' main modes of communication.

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[19] _____, "Computers Capture Capital Spending," Business Week June 3, 1996: 8.

Appendix A

Exhibit 1

May 8, 1996

Dear Sir or Madam:

I am an accounting student at The Ohio State University and am currently completing a thesis for graduation with distinction at the undergraduate level. I am working under the supervision of my faculty advisors, Professor Richard Murdock and Professor Waleed Muhanna.

I have developed the attached survey to analyze several factors that affect electronic communications between auditors and their clients. I would appreciate it if you would complete the survey by answering the questions as they relate to the three clients that you spend the most time on, your firm, and yourself. If you do not feel comfortable disclosing the names of the clients , complete the rest of the survey to the best of your knowledge and leave the name lines blank.

Please complete the survey as soon as possible and mail it to me in the postage paid envelope provided. Because of the time constraints of the study, surveys received after May 20 can not be used. All answers are anonymous and confidential and will be used only for statistical purposes in a paper to be completed this quarter. Your time and attention are greatly appreciated.

Sincerely,

Sarah R. Yoder

Exhibit 2 (The font and spacing of this exhibit have been changed from the original format in order to meet the requirements of this paper.)

Questionnaire

Please answer the following questions using information regarding the three clients that you spend the most time on. "Electronic communications" refers to communications with your clients either modem to modem or via the Internet.

Client #1 - Name: _____ Industry: _____ Annual Revenues: _____

1. What type of software does this client use to produce the data needed to conduct an audit? (check all that apply)

   ____ Software developed by your firm ____ Software developed by the client ____ Packaged software ____ Don't know

2. What type of hardware does this client currently have? (check all that apply)

   ____ Pcs ____ Minis/UNIX workstations ____ Mainframes ____ Network servers ____ Don't know

3. What mechanisms does the client have to communicate with you electronically? (check all that apply)

   ____ Modems ____ The Internet ____ None ____ Don't know

4. Does this client have an Information Systems Department? ____ Yes ____ No ____ Don't know
5. Does this client have an Accounting Information Systems Administrator? ____ Yes ____ No ____ Don't know
6. Does this client have a homepage? ____ Yes ____ No ____ Don't know
7. Does this client have more than one office location? ____ Yes ____ No ____ Don't know
8. How far from your office is the location of this client that you visit most often? ____ ≤ 45 miles ____ > 45 miles ____ Don't know
9. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 10)

   Did you or the client initially suggest the idea to communicate electronically? ____ You ____ Client

   Do you communicate modem to modem or via an Internet provider (Prodigy, America Online, Compuserve, etc.)?

   ____ Modem to modem ____ Internet provider ____ Don't know

10. How long have you worked on this client? ____ Years ____ Months

Client #2 - Name: _____ Industry: _____ Annual Revenues: _____

11. What type of software does this client use to produce the data needed to conduct an audit? (check all that apply)

    ____ Software developed by your firm ____ Software developed by the client ____ Packaged software ____ Don't know

12. What type of hardware does this client currently have? (check all that apply)

    ____ Pcs ____ Minis/UNIX workstations ____ Mainframes ____ Network servers ____ Don't know

13. What mechanisms does the client have to communicate with you electronically? (check all that apply)

    ____ Modems ____ The Internet ____ None ____ Don't know

14. Does this client have an Information Systems Department? ____ Yes ____ No ____ Don't know
15. Does this client have an Accounting Information Systems Administrator? ____ Yes ____ No ____ Don't know
16. Does this client have a homepage? ____ Yes ____ No ____ Don't know
17. Does this client have more than one office location? ____ Yes ____ No ____ Don't know
18. How far from your office is the location of this client that you visit most often? ____ ≤ 45 miles ____ > 45 miles ____ Don't know
19. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 20)

    Did you or the client initially suggest the idea to communicate electronically? ____ You ____ Client

    Do you communicate modem to modem or via an Internet provider (Prodigy, America Online, Compuserve, etc.)?

    ____ Modem to modem ____ Internet provider ____ Don't know

20. How long have you worked on this client? ____ Years ____ Months

Client #3 - Name: _____ Industry: _____ Annual Revenues: _____

21. What type of software does this client use to produce the data needed to conduct an audit? (check all that apply)

    ____ Software developed by your firm ____ Software developed by the client ____ Packaged software ____ Don't know

22. What type of hardware does this client currently have? (check all that apply)

    ____ Pcs ____ Minis/UNIX workstations ____ Mainframes ____ Network servers ____ Don't know

23. What mechanisms does the client have to communicate with you electronically? (check all that apply)

    ____ Modems ____ The Internet ____ None ____ Don't know

24. Does this client have an Information Systems Department? ____ Yes ____ No ____ Don't know

25. Does this client have an Accounting Information Systems Administrator? ____ Yes ____ No ____ Don't know

26. Does this client have a homepage? ____ Yes ____ No ____ Don't know

27. Does this client have more than one office location? ____ Yes ____ No ____ Don't know

28. How far from your office is the location of this client that you visit most often? ____ ≤ 45 miles ____ > 45 miles ____ Don't know

29. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 30)

Did you or the client initially suggest the idea to communicate electronically? ____ You ____ Client

Do you communicate modem to modem or via an Internet provider (Prodigy, America Online, Compuserve, etc.)?

____ Modem to modem ____ Internet provider ____ Don't know

30. How long have you worked on this client? ____ Years ____ Months

General Information - Please answer these questions regarding your firm and yourself.

31. Is there a technology support specialist available to you in your office? ____ Yes ____ No ____ Don't know

32. Is there a firm wide policy regarding electronic communications with clients? ____ Yes ____ No ____ Don't know

33. Does your firm have a homepage? ____ Yes ____ No ____ Don't know

34. What is your position in the firm? ____ Staff ____ Senior ____ Manager ____ Partner

35. How many years of professional experience do you have? ____ Years ____ Months

36. How long have you worked with this firm? ____ Years ____ Months

37. Sex _____ Male _____ Female Age _____ Highest degree earned _____Bachelor's _____Master's _____PhD

38. Please rate from 1 (not proficient) to 5 (very proficient) your proficiency using the following items:

Internet browsers	1	2	3	4	5	Spreadsheets	1	2	3	4	5
Database packages	1	2	3	4	5	E-mail	1	2	3	4	5

39. With regard to the clients you communicate with electronically, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to communicate electronically.

Distance	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

40. If you do not communicate electronically with your clients, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to not communicate electronically.

Security	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

Questions 41- 43: On a scale from 1 (strongly disagree) to 5 (strongly agree), rate the following statements.

41. Your larger clients have the capability to communicate electronically while your smaller clients do not. 1 2 3 4 5

42. Your firm has the capability to communicate electronically with your clients. 1 2 3 4 5

43. Distance is a factor in deciding whether to communicate electronically with a client. 1 2 3 4 5

Exhibit 3

Hypotheses

Hypothesis 1: The distance between the auditor's office and the client location affects whether electronic communication will exist.

8. How far from your office is the location of this client that you visit most often?____ ≤ 45 miles ____ > 45 miles ____ Don't know

9. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 10)

39. With regard to the clients you communicate with electronically, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to communicate electronically.

Distance	1 2 3 4 5 6 7	Technological capabilities of the client	1 2 3 4 5 6 7
Reliability	1 2 3 4 5 6 7	Technological capabilities of your firm	1 2 3 4 5 6 7
Size of the client	1 2 3 4 5 6 7	Other _____	1 2 3 4 5 6 7

	Strongly disagree				Strongly agree
43. Distance is a factor in deciding whether to communicate electronically with a client.	1	2	3	4	5

Hypothesis 2: The level of technological sophistication of a client affects whether it will communicate electronically with its auditors.

1. What type of software does this client use to produce the data needed to conduct an audit? (check all that apply)

____ Software developed by your firm ____ Software developed by the client ____ Packaged software ____ Don't know

2. What type of hardware does this client currently have? (check all that apply)

____ Pcs ____ Minis/UNIX workstations ____ Mainframes ____ Network servers ____ Don't know

3. What mechanisms does the client have to communicate with you electronically? (check all that apply)

____ Modems ____ The Internet ____ None ____ Don't know

4. Does this client have an Information Systems Department? ____ Yes ____ No ____ Don't know

5. Does this client have an Accounting Information Systems Administrator? ____ Yes ____ No ____ Don't know

9. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 10)

Do you communicate modem to modem or via an Internet provider (Prodigy, America Online, Compuserve, etc.)?

____ Modem to modem ____ Internet provider ____ Don't know

39. With regard to the clients you communicate with electronically, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to communicate electronically.

Distance	1 2 3 4 5 6 7	Technological capabilities of the client	1 2 3 4 5 6 7
Reliability	1 2 3 4 5 6 7	Technological capabilities of your firm	1 2 3 4 5 6 7
Size of the client	1 2 3 4 5 6 7	Other _____	1 2 3 4 5 6 7

40. If you do not communicate electronically with your clients, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to not communicate electronically.

Security	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

Hypothesis 3: The level of technological sophistication of the public accounting firm affects whether it will communicate electronically with its clients.

9. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 10)

31. Is there a technology support specialist available to you in your office? ____ Yes ____ No ____ Don't know

32. Is there a firm wide policy regarding electronic communications with clients? ____ Yes ____ No ____ Don't know

39. With regard to the clients you communicate with electronically, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to communicate electronically.

Distance	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

40. If you do not communicate electronically with your clients, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to not communicate electronically.

Security	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

	Strongly disagree				Strongly agree
42. Your firm has the capability to communicate electronically with your clients.	1	2	3	4	5

Hypothesis 4: The size of the client affects whether the client and the auditor will communicate electronically.

Annual Revenues: _____

4. Does this client have an Information Systems Department? ____ Yes ____ No ____ Don't know

5. Does this client have an Accounting Information Systems Administrator? ____ Yes ____ No ____ Don't know

7. Does this client have more than one office location? ____ Yes ____ No ____ Don't know

9. Does this client communicate with you electronically? ____ Yes ____ No(if No, skip to question 10)

39. With regard to the clients you communicate with electronically, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to communicate electronically.

Distance	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

40. If you do not communicate electronically with your clients, please rate the following factors on a scale from 1 (not important) to 7 (very important) as to how important these factors were in deciding to not communicate electronically.

Security	1	2	3	4	5	6	7	Technological capabilities of the client	1	2	3	4	5	6	7
Reliability	1	2	3	4	5	6	7	Technological capabilities of your firm	1	2	3	4	5	6	7
Size of the client	1	2	3	4	5	6	7	Other _____	1	2	3	4	5	6	7

	Strongly disagree				Strongly agree
41. Your larger clients have the capability to communicate electronically while your smaller clients do not.	1	2	3	4	5

Appendix B

Exhibit 1

OBS	SURVEY	CLIENT	Q1A	Q1B	Q1C	Q1D	Q2A	Q2B	Q2C	Q2D	Q2E	Q3A	Q3B	Q3C	Q3D	Q4	Q5	Q6	Q7	Q8	Q9P1	Q9P2	Q9P3A	Q9P3B	Q9P3C	Q10YRS	Q10MOS
1	1	1	0	1	0	0	1	0	1	1	0	0	0	1	0	1	3	3	1	2	2	.	.	.	.	2	0
2	1	2	0	0	1	0	0	0	1	1	0	0	0	1	0	1	1	2	2	1	2	.	.	.	.	2	0
3	1	3	0	0	1	0	0	0	1	1	0	0	0	1	0	1	1	3	1	2	2	.	.	.	.	2	0
4	2	1	0	0	1	0	1	0	0	1	0	1	1	0	0	1	1	3	1	1	1	1	1	1	0	0	9
5	2	2	1	0	1	0	1	0	0	0	0	0	0	0	1	3	3	3	2	1	2	.	.	.	.	0	2
6	2	3	0	0	1	0	1	0	0	1	0	1	0	0	0	2	2	3	2	1	2	.	.	.	.	0	3
7	3	1	0	0	1	0	1	1	1	1	0	0	0	0	1	1	2	1	1	1	2	.	.	.	.	4	0
8	3	2	0	0	0	0	1	1	1	1	0	1	0	0	0	1	1	1	1	1	2	.	.	.	.	4	0
9	3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	4	1	1	0	0	0	1	0	1	0	0	0	0	0	1	3	3	3	1	1	2	.	.	.	.	0	6
11	4	2	1	0	0	0	1	0	1	0	0	0	0	0	1	1	3	3	1	1	2	.	.	.	.	0	5
12	4	3	1	0	0	0	1	0	0	0	1	0	0	0	1	3	3	3	1	1	2	.	.	.	.	0	3
13	5	1	1	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	1	1	2	.	.	.	.	.	.
14	5	2	1	0	1	0	1	0	0	0	0	1	0	0	0	2	2	2	2	1	2	.	.	.	.	.	.
15	5	3	0	0	1	0	1	0	0	0	0	1	0	0	0	2	2	2	2	2	2	.	.	.	.	.	.
16	6	1	0	1	1	0	1	1	0	0	0	1	1	0	0	1	1	2	1	1	2	.	.	.	.	2	0
17	6	2	0	0	1	0	1	1	0	0	0	1	1	0	0	1	1	2	1	1	2	.	.	.	.	3	0
18	6	3	0	0	1	0	0	0	0	0	0	1	1	0	0	1	1	2	1	2	2	.	.	.	.	2	6
19	7	1	0	0	1	0	1	0	1	0	0	0	0	1	0	2	2	3	2	1	2	.	.	.	.	4	0
20	7	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	3	1	1	2	.	.	.	.	0	6
21	7	3	0	0	1	0	1	0	1	1	0	0	0	0	1	2	1	3	2	2	2	.	.	.	.	1	1
22	8	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	7	0
23	8	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	.	2	2	1	2	.	.	.	.	6	0
24	8	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	9	1	0	1	1	0	1	0	0	1	0	1	0	0	0	1	3	1	1	1	2	.	.	.	.	8	0
26	9	2	0	1	1	0	1	0	0	1	0	1	0	0	0	1	3	1	1	2	2	.	.	.	.	2	0
27	9	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	3	6
28	10	1	0	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1	1	1	2	.	.	.	.	10	0
29	10	2	0	1	1	0	1	1	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	5	0
30	10	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	11	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	.	.
32	11	2	0	1	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	2	1	1	1	0	0	.	.
33	11	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
34	12	1	0	0	1	0	1	1	0	0	0	0	0	0	1	1	2	2	2	1	2	.	.	.	.	4	0
35	12	2	0	0	1	0	1	0	1	0	0	0	0	0	1	1	1	3	1	1	2	.	.	.	.	4	0
36	12	3	0	1	1	0	1	0	1	0	0	0	0	0	1	1	1	3	2	1	2	.	.	.	.	4	0
37	13	1	1	0	1	0	1	0	0	0	0	0	0	1	0	2	1	3	1	1	2	.	.	.	.	2	0
38	13	2	1	0	1	0	1	0	0	0	0	0	0	1	0	2	2	3	2	2	2	.	.	.	.	2	0
39	13	3	1	1	1	0	1	0	1	1	0	1	0	0	0	1	3	3	1	1	2	.	.	.	.	2	0
40	14	1	1	1	1	0	1	0	1	1	0	1	1	0	0	1	2	1	1	1	1	1	1	0	0	6	0
41	14	2	1	1	1	0	1	0	1	1	0	0	1	1	0	1	2	2	1	1	2	.	.	.	.	6	0
42	14	3	1	1	1	0	1	0	1	1	0	1	1	0	0	1	2	1	1	1	1	2	1	0	0	1	0
43	15	1	0	0	1	0	0	0	1	1	0	0	0	1	0	1	2	2	1	2	2	.	.	.	.	10	0
44	15	2	0	0	1	0	0	0	1	0	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	6	0
45	15	3	0	0	1	0	1	0	0	0	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	3	0
46	16	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	2	2	1	1	2	1	.	.	.	.
47	16	2	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	1	2	1	1	2	1	.	.	.	.
48	16	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	17	1	1	1	1	0	1	0	1	1	0	0	0	1	0	1	2	3	2	1	2	.	.	.	.	10	0
50	17	2	1	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	1	11
51	17	3	1	1	1	0	1	1	1	1	0	0	0	1	0	1	2	2	2	2	2	.	.	.	.	6	2
52	18	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	3	1	1	2	1	1	0	0	.	.
53	18	2	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1	3	1	1	2	.	.	.	.	.	.
54	18	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
55	19	1	0	1	1	0	1	0	1	1	0	1	1	1	0	1	1	3	1	1	2	.	.	.	.	3	0
56	19	2	0	1	1	0	1	1	1	0	0	1	1	0	0	1	2	1	1	1	2	.	.	.	.	3	0

OBS	SURVEY	CLIENT	Q1A	Q1B	Q1C	Q1D	Q2A	Q2B	Q2C	Q2D	Q2E	Q3A	Q3B	Q3C	Q3D	Q4	Q5	Q6	Q7	Q8	Q9P1	Q9P2	Q9P3A	Q9P3B	Q9P3C	Q10YRS	Q10MOS
57	19	3	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	3	1	1	2	.	.	.	.	5	0
58	20	1	0	0	1	0	0	1	0	0	0	0	0	1	0	2	2	2	1	2	2	.	.	.	.	4	0
59	20	2	0	1	0	0	0	0	1	0	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	4	0
60	20	3	0	0	1	0	0	0	0	1	0	0	0	1	0	2	2	2	2	1	2	.	.	.	.	1	0
61	21	1	0	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1	1	1	2	.	.	.	.	2	0
62	21	2	0	1	1	0	1	0	0	1	0	0	0	1	0	2	2	2	1	1	2	.	.	.	.	2	0
63	21	3	0	0	0	0	1	0	0	0	0	0	0	1	0	2	2	2	2	2	2	.	.	.	.	2	0
64	22	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	2	3	1	1	2	.	.	.	.	13	0
65	22	2	0	1	1	0	1	1	1	0	0	0	1	0	0	1	1	3	1	2	2	.	.	.	.	8	0
66	22	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
67	23	1	0	1	0	0	1	1	1	1	0	0	1	0	0	1	1	3	1	1	2	.	.	.	.	5	0
68	23	2	0	1	0	0	1	0	1	1	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	2	0
69	23	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
70	24	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	3	1	1	2	.	.	.	.	0	3
71	24	2	0	0	1	0	1	1	0	0	0	1	0	0	0	1	1	3	1	2	2	.	.	.	.	0	3
72	24	3	0	0	1	0	1	0	0	0	0	1	0	0	0	2	1	3	2	1	2	.	.	.	.	0	1
73	25	1	0	1	1	0	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	0	9	0
74	25	2	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	2	0
75	25	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
76	26	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	2	1	1	1	2	.	.	.	.	5	2
77	26	2	0	0	1	0	1	0	1	1	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	6	0
78	26	3	0	1	1	0	1	0	1	0	0	0	0	1	0	1	2	1	1	2	2	.	.	.	.	3	0
79	27	1	0	1	1	0	0	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	0	5	2
80	27	2	0	1	1	0	0	0	1	0	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	2	0
81	27	3	0	1	1	0	0	0	1	0	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	4	6
82	28	1	1	0	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0	1	0	4	0
83	28	2	0	0	1	0	1	0	1	1	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	3	0
84	28	3	0	1	0	0	1	1	1	1	0	0	0	1	0	1	1	1	1	1	2	.	.	.	.	4	0
85	29	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	2	0
86	29	2	0	1	1	0	1	1	1	1	0	0	0	1	0	1	3	3	1	2	2	.	.	.	.	1	0
87	29	3	0	1	1	0	1	1	0	1	0	.	.	.	.	2	2	2	2	2	2	.	.	.	.	2	0
88	30	1	0	1	1	0	1	0	0	1	0	1	1	0	0	1	2	1	1	1	1	1	0	1	0	5	0
89	30	2	1	1	1	0	1	1	0	1	0	1	1	0	0	1	2	3	1	1	1	2	0	1	0	5	0
90	30	3	0	1	1	0	1	1	0	1	0	1	1	0	0	1	2	3	1	2	2	.	.	.	.	5	0
91	31	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	3	1	1	2	.	.	.	.	6	0
92	31	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
93	31	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
94	32	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	3	0
95	32	2	0	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	2	1	2	.	.	.	.	3	0
96	32	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	4	0
97	33	1	0	0	1	0	1	0	1	0	0	1	0	0	0	1	2	2	1	1	2	.	.	.	.	2	0
98	33	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	1	0
99	33	3	1	0	1	0	1	0	0	1	0	1	0	0	0	2	2	2	2	1	2	.	.	.	.	2	0
100	34	1	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	3	1	2	2	.	.	.	.	3	6
101	34	2	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	3	1	2	2	.	.	.	.	2	0
102	34	3	0	1	1	0	0	0	1	0	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	3	0
103	35	1	0	1	1	0	1	0	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	0	10
104	35	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	1	8
105	35	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	0	3
106	36	1	1	1	1	0	1	1	1	1	0	1	0	0	0	1	2	2	1	1	2	.	.	.	.	4	0
107	36	2	1	1	1	0	1	1	1	1	0	1	0	0	0	1	2	1	1	1	2	.	.	.	.	6	0
108	36	3	1	1	1	0	1	1	1	1	0	1	0	0	0	2	2	2	1	1	2	.	.	.	.	9	0
109	37	1	0	0	1	0	1	0	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	1	0
110	37	2	0	0	1	0	1	0	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	4	0
111	37	3	0	0	1	0	1	0	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	4	0
112	38	1	0	0	1	0	1	0	1	0	0	0	0	1	0	3	3	2	1	2	2	.	.	.	.	2	0

OBS	SURVEY	CLIENT	Q1A	Q1B	Q1C	Q1D	Q2A	Q2B	Q2C	Q2D	Q2E	Q3A	Q3B	Q3C	Q3D	Q4	Q5	Q6	Q7	Q8	Q9P1	Q9P2	Q9P3A	Q9P3B	Q9P3C	Q10YRS	Q10MOS
113	38	2	0	0	1	0	1	0	1	0	0	0	0	1	0	3	3	1	1	2	2	.	.	.	.	2	0
114	38	3	0	0	1	0	1	0	1	0	0	0	0	1	0	3	3	3	1	2	2	.	.	.	.	2	0
115	39	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	2	0
116	39	2	0	0	1	0	1	0	1	0	0	1	0	0	0	1	1	2	1	1	2	.	.	.	.	2	0
117	39	3	0	0	1	0	1	0	1	0	0	1	0	0	0	2	2	2	1	2	2	.	.	.	.	2	0
118	40	1	0	0	1	0	1	0	0	1	0	0	0	1	0	2	1	2	1	2	2	.	.	.	.	3	0
119	40	2	0	0	1	0	1	1	0	0	0	0	0	1	0	1	1	2	1	2	2	.	.	.	.	2	0
120	40	3	0	0	1	0	1	1	0	1	0	0	1	0	0	1	1	1	1	1	2	.	.	.	.	2	0
121	41	1	0	0	1	0	1	1	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	5	0
122	41	2	0	1	1	0	1	0	1	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	4	0
123	41	3	0	0	1	0	1	1	0	1	0	1	0	0	0	2	1	2	1	1	2	.	.	.	.	7	0
124	42	1	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	2	1	2	2	.	.	.	.	2	0
125	42	2	0	0	1	0	0	0	0	1	0	1	0	0	0	1	1	2	1	2	1	1	1	0	0	6	0
126	42	3	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	2	1	2	2	.	.	.	.	2	0
127	43	1	1	0	1	0	1	0	0	0	0	0	0	1	0	2	1	2	1	2	2	.	.	.	.	2	0
128	43	2	0	1	1	0	1	0	0	0	0	1	1	0	0	1	1	3	1	1	2	.	.	.	.	2	0
129	43	3	1	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	1	1	2	.	.	.	.	2	0
130	44	1	0	0	1	0	1	1	1	1	0	0	0	1	0	1	2	2	1	2	2	.	.	.	.	2	0
131	44	2	0	0	1	0	1	1	1	1	0	0	0	1	0	1	2	2	1	2	2	.	.	.	.	2	4
132	44	3	0	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	1	2	2	.	.	.	.	2	0
133	45	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	1	1	2	.	.	.	.	1	10
134	45	2	1	1	1	0	1	0	1	1	0	1	0	0	0	1	1	.	1	1	2	.	.	.	.	1	0
135	45	3	0	0	1	0	1	0	1	1	0	1	1	0	0	2	1	2	2	2	1	1	0	1	0	1	10
136	46	1	0	1	0	0	0	0	1	0	0	0	0	1	0	2	2	2	2	1	2	.	.	.	.	1	0
137	46	2	0	1	1	0	0	0	1	0	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	1	0
138	46	3	0	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	1	1	2	.	.	.	.	1	0
139	47	1	0	0	1	0	0	0	0	1	0	1	0	0	0	2	2	2	2	1	2	.	.	.	.	6	0
140	47	2	0	0	1	0	0	0	0	1	0	1	0	0	0	2	2	2	2	2	1	1	1	0	0	1	0
141	47	3	0	0	1	0	0	0	0	1	0	0	0	1	0	2	2	2	2	2	2	.	.	.	.	2	0
142	48	1	0	0	1	0	0	0	1	0	0	1	0	0	0	1	2	3	1	1	2	.	.	.	.	0	5
143	48	2	0	0	1	0	0	0	1	0	0	0	0	1	0	1	2	3	1	1	2	.	.	.	.	4	0
144	48	3	0	0	1	0	0	0	1	0	0	0	0	1	0	1	1	2	2	1	2	.	.	.	.	4	0
145	49	1	0	0	1	0	0	0	0	0	1	0	0	1	0	2	1	2	1	2	2	.	.	.	.	3	0
146	49	2	0	0	1	0	0	1	0	0	0	0	0	1	0	2	2	2	2	1	2	.	.	.	.	3	0
147	49	3	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	2	2	2	2	.	.	.	.	2	0
148	50	1	0	1	1	0	1	0	0	1	0	1	1	0	0	1	3	3	1	1	2	.	.	.	.	0	6
149	50	2	0	1	1	0	1	0	1	1	0	1	1	0	0	1	3	3	1	2	2	.	.	.	.	0	6
150	50	3	0	1	1	0	1	0	1	0	0	0	0	0	1	3	3	3	1	1	2	.	.	.	.	0	6
151	51	1	0	1	1	0	1	0	1	0	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	1	0
152	51	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	2	2	1	1	2	.	.	.	.	1	0
153	51	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	3	0
154	52	1	1	1	1	0	1	0	1	1	0	0	0	1	0	1	3	3	1	1	2	.	.	.	.	1	0
155	52	2	1	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	1	2	2	.	.	.	.	4	0
156	52	3	1	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	2	1	2	.	.	.	.	1	0
157	53	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	3	1	1	2	.	.	.	.	6	0
158	53	2	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	3	1	2	2	.	.	.	.	4	0
159	53	3	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	2	2	2	.	.	.	.	4	0
160	54	1	0	0	1	0	0	0	1	0	0	0	0	1	0	2	2	2	1	2	2	.	.	.	.	2	8
161	54	2	0	0	1	0	0	0	1	0	0	0	0	1	0	2	2	2	1	2	2	.	.	.	.	2	8
162	54	3	0	1	0	0	0	0	1	0	0	0	0	1	0	2	2	2	2	2	2	.	.	.	.	2	8
163	55	1	1	0	1	0	0	0	0	1	0	0	0	1	0	1	1	2	2	1	2	.	.	.	.	2	0
164	55	2	1	0	1	0	0	0	0	1	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	2	0
165	55	3	1	0	1	0	0	0	0	1	0	0	0	1	0	1	2	2	2	1	2	.	.	.	.	2	0
166	56	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	1	3	1	1	2	.	.	.	.	0	5
167	56	2	0	0	1	0	0	0	0	1	0	0	0	1	0	2	2	3	1	2	2	.	.	.	.	0	1
168	56	3	0	0	1	0	0	0	0	1	0	0	0	1	0	1	2	3	2	2	2	.	.	.	.	0	1

OBS	SURVEY	CLIENT	Q1A	Q1B	Q1C	Q1D	Q2A	Q2B	Q2C	Q2D	Q2E	Q3A	Q3B	Q3C	Q3D	Q4	Q5	Q6	Q7	Q8	Q9P1	Q9P2	Q9P3A	Q9P3B	Q9P3C	Q10YRS	Q10MOS
169	57	1	0	1	1	0	1	0	1	0	0	0	0	1	0	1	3	3	2	1	2	.	.	.	.	7	0
170	57	2	0	0	1	0	1	0	1	0	0	1	0	0	0	1	2	3	2	2	1	2	1	0	1	4	6
171	57	3	0	1	1	0	1	0	1	1	0	1	0	0	0	1	3	3	1	1	2	.	.	.	.	10	0
172	58	1	0	0	1	0	1	0	1	1	0	0	0	1	0	1	1	1	1	1	2	.	.	.	.	9	0
173	58	2	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	1	1	1	2	.	.	.	.	15	0
174	58	3	0	1	0	0	1	0	0	1	0	0	1	0	0	1	1	1	1	2	1	1	1	0	0	2	0
175	59	1	0	0	1	0	1	0	1	0	0	1	0	0	0	2	1	2	1	1	2	.	.	.	.	3	0
176	59	2	0	0	1	0	1	0	1	0	0	1	0	0	0	2	1	2	1	1	2	.	.	.	.	7	0
177	59	3	0	0	1	0	1	0	1	0	0	1	0	0	0	2	1	2	2	1	2	.	.	.	.	4	0
178	60	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	2	2	2	.	.	.	.	5	8
179	60	2	0	0	1	0	0	0	1	1	0	1	0	0	0	1	2	2	1	1	2	.	.	.	.	6	0
180	60	3	0	0	1	0	1	0	0	0	0	1	0	0	0	2	2	2	1	1	2	.	.	.	.	1	0
181	61	1	0	0	1	0	1	0	1	1	0	0	0	1	0	1	1	1	2	1	2	.	.	.	.	1	0
182	61	2	0	0	1	0	1	0	1	0	0	0	0	1	0	1	1	2	2	2	2	.	.	.	.	10	0
183	61	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
184	62	1	0	0	1	0	1	0	0	0	0	0	0	1	0	2	2	2	1	1	2	.	.	.	.	7	0
185	62	2	0	1	0	0	0	0	1	0	0	0	0	1	0	1	1	2	2	1	2	.	.	.	.	7	0
186	62	3	0	0	1	0	0	0	1	0	0	0	0	1	0	1	1	2	1	1	2	.	.	.	.	7	0
187	63	1	0	0	1	0	1	0	0	0	0	0	0	1	0	1	2	1	1	1	2	.	.	.	.	.	.
188	63	2	0	0	1	0	1	0	0	0	0	0	1	0	0	1	2	2	1	1	1	2	0	1	0	.	.
189	63	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	2	2	1	2	2	.	.	.	.	.	.
190	64	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	1	1	2	.	.	.	.	3	0
191	64	2	0	0	1	0	1	0	0	1	0	1	0	0	0	1	1	2	1	2	2	.	.	.	.	1	0
192	64	3	0	0	1	0	1	0	0	1	0	0	0	1	0	1	1	2	2	2	2	.	.	.	.	2	0
193	65	1	0	0	1	0	1	0	0	0	0	1	0	0	0	1	1	3	1	1	2	.	.	.	.	0	1
194	65	2	0	0	1	0	1	0	0	0	0	1	0	0	0	1	2	2	1	2	2	.	.	.	.	0	1
195	65	3	0	0	1	0	1	0	0	0	0	1	0	0	0	1	2	2	1	1	2	.	.	.	.	0	1

OBS	SURVEY	Q31	Q32	Q33	Q34	Q35YRS	Q35MOS	Q36YRS	Q36MOS	SEX	AGE	DEGREE	Q38A	Q38B	Q38C	Q38D	Q39A	Q39B	Q39C	Q39D	Q39E	Q39F	Q40A	Q40B	Q40C	Q40D	Q40E	Q40F	Q41	Q42	Q43
1	1	1	1	1	1	2	0	2	0	2	.	1	1	1	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	2	1	1	1	1	0	9	0	9	2	22	1	3	3	5	4	7	5	3	7	5	.	6	6	7	6	1	.	3	5	4
3	3	1	1	1	2	4	0	4	0	2	25	1	1	3	4	4	.	.	.	.	.	.	7	7	7	1	1	.	4	3	1
4	4	1	2	1	1	0	8	0	8	1	32	1	2	4	5	3	.	.	.	.	.	.	2	2	2	4	6	.	3	1	3
5	5	1	2	1	4	21	0	21	0	1	.	1	.	4	5	5	.	.	.	.	.	.	6	6	4	1	1	.	5	5	1
6	6	1	1	1	1	3	0	3	0	1	27	1	4	5	5	4	.	.	.	.	.	.	4	4	4	2	7	.	4	5	1
7	7	1	1	3	2	3	10	3	10	2	26	1	1	3	5	5	.	.	.	.	.	.	1	1	7	7	1	.	4	5	2
8	8	1	.	1	3	11	0	11	0	2	32	1	2	2	5	4	.	.	.	.	.	.	1	1	1	1	1	.	3	4	1
9	9	1	1	1	3	8	0	8	0	2	30	1	3	4	5	5	6	4	3	6	4	.	.	.	.	7	.	.	5	5	3
10	10	1	3	1	3	9	8	9	8	2	36	1	2	1	4	4	.	.	.	.	.	.	7	3	3	1	1	.	3	5	4
11	11	1	1	1	3	11	0	11	0	1	.	1	3	2	4	5	3	3	3	7	6	6	3	3	3	7	1	.	3	5	3
12	12	1	1	3	2	4	0	4	0	2	26	1	1	4	4	1	.	.	.	.	.	.	5	1	2	5	1	7	5	5	1
13	13	1	2	3	1	1	9	1	9	2	24	1	1	3	5	3	.	.	.	.	.	.	1	1	7	7	4	.	5	5	3
14	14	1	1	1	4	16	2	16	2	1	39	1	3	3	4	4	3	4	4	6	6	.	6	6	4	3	3	.	2	4	2
15	15	1	2	2	4	27	0	25	0	1	49	1	1	1	2	3	.	.	.	.	.	.	3	3	3	3	3	.	3	4	2
16	16	1	2	1	2	6	0	4	5	1	.	1	3	3	4	2	.	.	.	.	.	.	7	7	1	5	5	.	3	3	4
17	17	1	3	1	4	23	5	.	.	1	46	2	2	2	4	4	.	.	.	.	.	.	4	1	6	6	1	.	2	5	3
18	18	1	2	1	4	25	0	25	0	1	54	2	2	1	2	3	3	3	3	5	5	.	6	6	2	5	2	.	1	4	1
19	19	1	1	3	3	8	0	8	0	1	31	1	1	3	5	5	.	.	.	.	.	.	1	1	1	6	7	.	4	4	3
20	20	1	1	.	2	3	0	3	0	1	25	1	1	3	5	5	.	.	.	.	.	.	7	7	1	7	7	.	3	5	1
21	21	1	1	1	2	2	0	2	0	2	24	1	4	2	5	5	.	.	.	.	.	.	.	.	.	.	.	.	1	5	1
22	22	1	1	1	3	13	0	13	0	1	.	.	1	1	3	4	5	7	5	6	6	.	7	7	5	6	.	.	4	5	2
23	23	1	3	3	3	8	0	8	0	1	29	1	1	2	5	5	.	.	.	.	.	.	.	.	.	.	7	.	5	4	3
24	24	1	1	1	1	1	4	0	7	1	23	1	4	3	5	4	.	.	.	.	.	.	1	1	1	1	1	.	2	5	4
25	25	1	2	3	3	9	0	9	0	1	31	1	2	2	5	5	4	4	6	6	5	.	4	4	6	7	2	.	4	4	3
26	26	1	1	1	3	6	1	6	1	1	.	1	3	1	4	4	.	.	.	.	.	.	.	.	.	.	.	6	5	5	4
27	27	1	3	1	3	5	2	5	2	1	27	1	5	3	5	5	3	3	7	7	7	7	1	1	5	7	1	7	4	5	3
28	28	1	1	1	2	4	0	4	0	1	26	1	5	3	5	5	2	4	3	7	7	.	1	1	1	7	1	.	2	5	1
29	29	1	3	3	1	2	0	2	0	1	24	1	2	2	4	3	.	.	.	.	.	.	.	.	.	.	.	.	3	5	1
30	30	1	2	1	3	7	0	7	0	1	.	1	2	1	4	4	1	2	1	2	2	.	1	1	1	5	1	.	1	5	1
31	31	1	3	1	3	7	0	7	0	1	.	1	1	2	4	3	2	3	2	6	6	.	5	4	1	6	6	.	4	4	1
32	32	1	1	1	3	8	0	7	0	2	29	1	1	1	4	4	.	.	.	.	.	.	1	1	1	1	1	7	2	5	5
33	33	1	1	1	1	2	0	2	0	1	24	1	1	4	5	4	.	.	.	.	.	.	1	1	1	7	1	.	3	5	3
34	34	1	1	3	3	4	8	4	8	1	27	1	3	2	4	4	.	.	.	.	.	.	1	1	4	5	2	.	3	5	4
35	35	1	3	1	2	4	9	1	8	1	25	1	1	2	4	4	.	.	.	.	.	.	1	1	1	7	1	.	4	5	1
36	36	1	2	1	3	12	0	12	0	1	33	1	4	2	4	4	.	.	.	.	.	.	4	4	2	6	5	.	4	4	2
37	37	1	2	1	3	9	10	4	4	1	.	1	1	1	3	3	.	.	.	.	.	.	7	7	1	7	7	.	2	4	2
38	38	1	3	1	1	2	0	2	0	2	23	1	2	2	4	4	.	.	.	.	.	.	3	2	5	5	5	.	2	4	2
39	39	1	2	1	2	3	0	2	0	1	.	.	4	4	5	5	1	1	1	1	1	.	6	4	7	6	2	.	5	5	1
40	40	1	2	1	3	11	0	11	0	1	34	1	1	2	3	4	.	.	.	.	.	.	2	2	2	6	6	.	3	4	3
41	41	1	2	1	4	19	1	19	1	1	42	1	2	2	3	4	.	.	.	.	.	.	2	2	2	6	4	.	3	5	4
42	42	1	2	2	4	23	0	23	0	1	45	1	1	3	4	4	5	4	5	5	5	7	1	4	3	5	3	7	3	5	3
43	43	1	3	1	2	2	0	2	0	2	24	1	2	3	5	4	.	.	.	.	.	.	5	5	6	6	2	.	5	5	1
44	44	1	2	1	3	6	8	2	4	1	29	1	4	3	5	4	.	.	.	.	.	.	1	1	1	1	1	7	2	4	2
45	45	1	1	1	1	1	10	1	10	1	23	1	3	3	4	5	2	2	2	3	3	.	5	5	5	4	7	.	1	5	1
46	46	1	3	3	3	10	0	1	7	1	33	2	1	3	5	4	2	5	5	6	6	.	.	.	.	.	.	.	4	5	3
47	47	1	1	3	3	7	0	7	0	2	29	1	1	1	4	4	6	5	1	6	6	.	1	1	1	1	1	.	2	5	2
48	48	1	3	2	2	4	0	4	0	2	26	1	3	4	5	4	.	.	.	.	.	.	1	1	5	4	1	.	3	5	1
49	49	1	3	1	2	3	0	3	0	2	24	1	1	2	5	4	.	.	.	.	.	.	.	.	.	.	.	.	2	2	1
50	50	1	1	1	1	0	8	0	8	1	23	1	5	5	5	5	.	.	.	.	.	.	6	6	2	5	3	.	4	4	3
51	51	1	2	1	2	3	0	3	0	1	25	1	3	4	5	5	.	.	.	.	.	.	3	2	2	4	1	6	4	5	2

OBS	SURVEY	Q31	Q32	Q33	Q34	Q35YRS	Q35MOS	Q36YRS	Q36MOS	SEX	AGE	DEGREE	Q38A	Q38B	Q38C	Q38D	Q39A	Q39B	Q39C	Q39D	Q39E	Q39F	Q40A	Q40B	Q40C	Q40D	Q40E	Q40F	Q41	Q42	Q43
52	52	1	1	3	2	3	8	3	8	1	26	1	3	2	5	4	.	.	.	.	.	.	1	6	7	7	5	.	4	5	3
53	53	1	1	1	3	6	0	6	0	2	28	1	3	3	4	4	.	.	.	.	.	.	5	3	3	5	1	.	4	5	3
54	54	1	2	1	2	2	9	2	9	2	24	1	1	2	4	4	.	.	.	.	.	.	1	1	1	7	2	.	2	4	3
55	55	1	3	1	1	2	0	2	0	1	25	1	3	2	3	1	.	.	.	.	.	.	3	3	3	6	6	.	2	1	3
56	56	1	3	3	2	6	6	6	6	1	.	1	1	2	4	4	4	4	5	3	3	.	4	4	4	4	4	.	4	3	4
57	57	1	1	1	4	21	0	21	0	1	43	1	1	1	3	3	6	6	1	7	7	.	.	.	.	.	.	.	1	5	3
58	58	1	3	1	4	18	0	18	0	1	38	1	4	2	3	4	2	6	1	6	5	.	2	2	1	7	2	.	1	4	1
59	59	1	3	2	3	13	0	13	0	1	34	1	2	2	4	3	5	3	3	6	6	5	5	5	6	7	4	.	4	4	1
60	60	1	1	1	3	6	9	6	9	1	30	1	1	1	5	3	.	.	.	.	.	.	6	6	4	4	1	.	3	5	3
61	61	1	3	1	3	10	0	10	0	2	.	1	1	2	3	2	.	.	.	.	.	.	1	1	1	6	6	.	3	5	3
62	62	1	3	3	3	7	0	7	0	2	28	1	1	1	4	1	.	.	.	.	.	.	.	.	.	.	.	.	1	4	.
63	63	1	1	3	1	2	0	2	0	1	24	1	1	1	4	2	.	.	.	.	.	.	1	1	1	1	5	.	2	5	1
64	64	1	1	1	2	3	0	3	0	1	25	1	4	2	5	4	5	5	6	5	5	.	6	5	3	6	5	.	3	4	4
65	65	1	3	3	1	1	0	0	6	1	.	1	3	4	4	4	.	.	.	.	.	.	4	5	7	7	4	.	5	5	3

Exhibit 2

TABLE OF Q8 BY Q9P1

Q8 Q9P1

Frequency Expected Percent Row Pct Col Pct	1	2	Total
1	9 9.918 4.92 7.44 60.00	112 111.08 61.20 92.56 66.67	121 66.12
2	6 5.082 3.28 9.68 40.00	56 56.918 30.60 90.32 33.33	62 33.88
Total	15 8.20	168 91.80	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q8 BY Q9P1

Statistic	DF	Value	Prob
Chi-Square	1	0.273	0.601
Likelihood Ratio Chi-Square	1	0.267	0.605
Continuity Adj. Chi-Square	1	0.057	0.812
Mantel-Haenszel Chi-Square	1	0.272	0.602
Fisher's Exact Test (Left)			0.397
(Right)			0.793
(2-Tail)			0.582
Phi Coefficient		-0.039	
Contingency Coefficient		0.039	
Cramer's V		-0.039	

Effective Sample Size = 183
Frequency Missing = 12

Question 39A Responses

7		
6		
3		
3		
3		
5		
4		
3		
2		
1		
2		
1		
5		
2		
2		
6		
4		
6		
2	3.666667	Mean
5		
5	1.798147	Standard Deviation

Question 43 Responses

4	3	
1	3	
3	3	
1	3	
1	4	
2	3	
1	1	
3	1	
4	3	
3	3	2.349206 Mean
1	1	
3	4	1.138175 Standard Deviation
2	3	
2		
4		
3		
1		
3		
1		
1		
2		
3		
4		
3		
4		
3		
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1		
3		
2		

Exhibit 3

TABLE OF Q9P1 BY Q1A

Q9P1 Q1A

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	11	4	15
	12.541	2.459	
	6.01	2.19	8.20
	73.33	26.67	
	7.19	13.33	
2	142	26	168
	140.46	27.541	
	77.60	14.21	91.80
	84.52	15.48	
	92.81	86.67	
Total	153	30	183
	83.61	16.39	100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q1A

Statistic	DF	Value	Prob
Chi-Square	1	1.258	0.262
Likelihood Ratio Chi-Square	1	1.113	0.292
Continuity Adj. Chi-Square	1	0.574	0.449
Mantel-Haenszel Chi-Square	1	1.251	0.263
Fisher's Exact Test (Left)			0.215
(Right)			0.924
(2-Tail)			0.276
Phi Coefficient		-0.083	
Contingency Coefficient		0.083	
Cramer's V		-0.083	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q1B

Q9P1 Q1B

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	7 9.4262 3.83 46.67 6.09	8 5.5738 4.37 53.33 11.76	15 8.20
2	108 105.57 59.02 64.29 93.91	60 62.426 32.79 35.71 88.24	168 91.80
Total	115 62.84	68 37.16	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q1B

Statistic	DF	Value	Prob
Chi-Square	1	1.831	0.176
Likelihood Ratio Chi-Square	1	1.767	0.184
Continuity Adj. Chi-Square	1	1.154	0.283
Mantel-Haenszel Chi-Square	1	1.821	0.177
Fisher's Exact Test (Left)			0.142
(Right)			0.947
(2-Tail)			0.264
Phi Coefficient		-0.100	
Contingency Coefficient		0.100	
Cramer's V		-0.100	

Effective Sample Size = 183
Frequency Missing = 12

TABLE OF Q9P1 BY Q1C

Q9P1 Q1C

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	2	13	15
	1.3934	13.607	
	1.09	7.10	8.20
	13.33	86.67	
	11.76	7.83	
2	15	153	168
	15.607	152.39	
	8.20	83.61	91.80
	8.93	91.07	
	88.24	92.17	
Total	17	166	183
	9.29	90.71	100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q1C

Statistic	DF	Value	Prob
Chi-Square	1	0.317	0.573
Likelihood Ratio Chi-Square	1	0.286	0.593
Continuity Adj. Chi-Square	1	0.010	0.921
Mantel-Haenszel Chi-Square	1	0.315	0.574
Fisher's Exact Test (Left)			0.850
(Right)			0.417
(2-Tail)			0.635
Phi Coefficient		0.042	
Contingency Coefficient		0.042	
Cramer's V		0.042	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q2A

Q9P1 Q2A

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	4 3.8525 2.19 26.67 8.51	11 11.148 6.01 73.33 8.09	15 8.20
2	43 43.148 23.50 25.60 91.49	125 124.85 68.31 74.40 91.91	168 91.80
Total	47 25.68	136 74.32	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q2A

Statistic	DF	Value	Prob
Chi-Square	1	0.008	0.927
Likelihood Ratio Chi-Square	1	0.008	0.928
Continuity Adj. Chi-Square	1	0.000	1.000
Mantel-Haenszel Chi-Square	1	0.008	0.928
Fisher's Exact Test (Left)			0.668
(Right)			0.569
(2-Tail)			1.000
Phi Coefficient		0.007	
Contingency Coefficient		0.007	
Cramer's V		0.007	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q2B

Q9P1 Q2B

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	11 12.131 6.01 73.33 7.43	4 2.8689 2.19 26.67 11.43	15 8.20
2	137 135.87 74.86 81.55 92.57	31 32.131 16.94 18.45 88.57	168 91.80
Total	148 80.87	35 19.13	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q2B

Statistic	DF	Value	Prob
Chi-Square	1	0.601	0.438
Likelihood Ratio Chi-Square	1	0.555	0.456
Continuity Adj. Chi-Square	1	0.187	0.665
Mantel-Haenszel Chi-Square	1	0.597	0.440
Fisher's Exact Test (Left)			0.316
(Right)			0.867
(2-Tail)			0.492
Phi Coefficient		-0.057	
Contingency Coefficient		0.057	
Cramer's V		-0.057	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q2C

Q9P1 Q2C

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	7 7.0492 3.83 46.67 8.14	8 7.9508 4.37 53.33 8.25	15 8.20
2	79 78.951 43.17 47.02 91.86	89 89.049 48.63 52.98 91.75	168 91.80
Total	86 46.99	97 53.01	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q2C

Statistic	DF	Value	Prob
Chi-Square	1	0.001	0.979
Likelihood Ratio Chi-Square	1	0.001	0.979
Continuity Adj. Chi-Square	1	0.000	1.000
Mantel-Haenszel Chi-Square	1	0.001	0.979
Fisher's Exact Test (Left)			0.597
(Right)			0.614
(2-Tail)			1.000
Phi Coefficient		-0.002	
Contingency Coefficient		0.002	
Cramer's V		-0.002	

Effective Sample Size = 183
Frequency Missing = 12

TABLE OF Q9P1 BY Q2D

Q9P1 Q2D

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	2 5.9016 1.09 13.33 2.78	13 9.0984 7.10 86.67 11.71	15 8.20
2	70 66.098 38.25 41.67 97.22	98 101.9 53.55 58.33 88.29	168 91.80
Total	72 39.34	111 60.66	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q2D

Statistic	DF	Value	Prob
Chi-Square	1	4.632	0.031
Likelihood Ratio Chi-Square	1	5.327	0.021
Continuity Adj. Chi-Square	1	3.521	0.061
Mantel-Haenszel Chi-Square	1	4.607	0.032
Fisher's Exact Test (Left)			0.025
(Right)			0.996
(2-Tail)			0.050
Phi Coefficient		-0.159	
Contingency Coefficient		0.157	
Cramer's V		-0.159	

Effective Sample Size = 183
Frequency Missing = 12

TABLE OF Q9P1 BY Q3A

Q9P1 Q3A

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	5 9.2308 2.75 33.33 4.46	10 5.7692 5.49 66.67 14.29	15 8.24
2	107 102.77 58.79 64.07 95.54	60 64.231 32.97 35.93 85.71	167 91.76
Total	112 61.54	70 38.46	182 100.00

Frequency Missing = 13

STATISTICS FOR TABLE OF Q9P1 BY Q3A

Statistic	DF	Value	Prob
Chi-Square	1	5.495	0.019
Likelihood Ratio Chi-Square	1	5.327	0.021
Continuity Adj. Chi-Square	1	4.273	0.039
Mantel-Haenszel Chi-Square	1	5.464	0.019
Fisher's Exact Test (Left)			0.021
(Right)			0.995
(2-Tail)			0.026
Phi Coefficient		-0.174	
Contingency Coefficient		0.171	
Cramer's V		-0.174	

Effective Sample Size = 182
Frequency Missing = 13

TABLE OF Q9P1 BY Q3B

Q9P1 Q3B

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	3 12.94 1.65 20.00 1.91	12 2.0604 6.59 80.00 48.00	15 8.24
2	154 144.06 84.62 92.22 98.09	13 22.94 7.14 7.78 52.00	167 91.76
Total	157 86.26	25 13.74	182 100.00

Frequency Missing = 13

STATISTICS FOR TABLE OF Q9P1 BY Q3B

Statistic	DF	Value	Prob
Chi-Square	1	60.576	0.000
Likelihood Ratio Chi-Square	1	39.302	0.000
Continuity Adj. Chi-Square	1	54.635	0.000
Mantel-Haenszel Chi-Square	1	60.243	0.000
Fisher's Exact Test (Left)			9.97E-10
(Right)			1.000
(2-Tail)			9.97E-10
Phi Coefficient		-0.577	
Contingency Coefficient		0.500	
Cramer's V		-0.577	

Effective Sample Size = 182
Frequency Missing = 13
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q3C

Q9P1 Q3C

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	15 7.2527 8.24 100.00 17.05	0 7.7473 0.00 0.00 0.00	15 8.24
2	73 80.747 40.11 43.71 82.95	94 86.253 51.65 56.29 100.00	167 91.76
Total	88 48.35	94 51.65	182 100.00

Frequency Missing = 13

STATISTICS FOR TABLE OF Q9P1 BY Q3C

Statistic	DF	Value	Prob
Chi-Square	1	17.462	0.000
Likelihood Ratio Chi-Square	1	23.244	0.000
Continuity Adj. Chi-Square	1	15.281	0.000
Mantel-Haenszel Chi-Square	1	17.366	0.000
Fisher's Exact Test (Left)			1.000
(Right)			9.43E-06
(2-Tail)			9.43E-06
Phi Coefficient		0.310	
Contingency Coefficient		0.296	
Cramer's V		0.310	

Effective Sample Size = 182
Frequency Missing = 13

TABLE OF Q9P1 BY Q4

Q9P1 Q4

Frequency Expected Percent Row Pct Col Pct	1	2	3	Total
1	13 11.066 7.10 86.67 9.63	2 3.3607 1.09 13.33 4.88	0 0.5738 0.00 0.00 0.00	15 8.20
2	122 123.93 66.67 72.62 90.37	39 37.639 21.31 23.21 95.12	7 6.4262 3.83 4.17 100.00	168 91.80
Total	135 73.77	41 22.40	7 3.83	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q4

Statistic	DF	Value	Prob
Chi-Square	2	1.593	0.451
Likelihood Ratio Chi-Square	2	2.242	0.326
Mantel-Haenszel Chi-Square	1	1.585	0.208
Phi Coefficient		0.093	
Contingency Coefficient		0.093	
Cramer's V		0.093	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 33% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q5

Q9P1 / Q5	1	2	3	Total
1	8	7	0	15
	7.2527	6.2637	1.4835	
	4.40	3.85	0.00	8.24
	53.33	46.67	0.00	
	9.09	9.21	0.00	
2	80	69	18	167
	80.747	69.736	16.516	
	43.96	37.91	9.89	91.76
	47.90	41.32	10.78	
	90.91	90.79	100.00	
Total	88	76	18	182
	48.35	41.76	9.89	100.00

Frequency Missing = 13

STATISTICS FOR TABLE OF Q9P1 BY Q5

Statistic	DF	Value	Prob
Chi-Square	2	1.795	0.408
Likelihood Ratio Chi-Square	2	3.269	0.195
Mantel-Haenszel Chi-Square	1	0.828	0.363
Phi Coefficient		0.099	
Contingency Coefficient		0.099	
Cramer's V		0.099	

Effective Sample Size = 182
Frequency Missing = 13

TABLE OF Q9P1 BY Q9P3A

Q9P1 / Q9P3A	0	1	Total
1	7	8	15
	6.5625	8.4375	
	43.75	50.00	93.75
	46.67	53.33	
	100.00	88.89	
2	0	1	1
	0.4375	0.5625	
	0.00	6.25	6.25
	0.00	100.00	
	0.00	11.11	
Total	7	9	16
	43.75	56.25	100.00

Frequency Missing = 179

STATISTICS FOR TABLE OF Q9P1 BY Q9P3A

Statistic	DF	Value	Prob
Chi-Square	1	0.830	0.362
Likelihood Ratio Chi-Square	1	1.202	0.273
Continuity Adj. Chi-Square	1	0.000	1.000
Mantel-Haenszel Chi-Square	1	0.778	0.378
Fisher's Exact Test (Left)			1.000
(Right)			0.563
(2-Tail)			1.000
Phi Coefficient		0.228	
Contingency Coefficient		0.222	
Cramer's V		0.228	

Effective Sample Size = 16
Frequency Missing = 179
WARNING: 92% of the data are missing.
WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q9P3B

Q9P1 Q9P3B

Frequency Expected Percent Row Pct Col Pct	0	1	Total
1	7 7.5 43.75 46.67 87.50	8 7.5 50.00 53.33 100.00	15 93.75
2	1 0.5 6.25 100.00 12.50	0 0.5 0.00 0.00 0.00	1 6.25
Total	8 50.00	8 50.00	16 100.00

Frequency Missing = 179

STATISTICS FOR TABLE OF Q9P1 BY Q9P3B

Statistic	DF	Value	Prob
Chi-Square	1	1.067	0.302
Likelihood Ratio Chi-Square	1	1.453	0.228
Continuity Adj. Chi-Square	1	0.000	1.000
Mantel-Haenszel Chi-Square	1	1.000	0.317
Fisher's Exact Test (Left)			0.500
(Right)			1.000
(2-Tail)			1.000
Phi Coefficient		-0.258	
Contingency Coefficient		0.250	
Cramer's V		-0.258	

Effective Sample Size = 16
Frequency Missing = 179
WARNING: 92% of the data are missing.
WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Question 39D Responses

7		
6		
7		
6		
5		
6		
6		
7		
7		
2		
6		
1		
5		
3		
6		
6		
3		
7		
6	5.380952	Mean
6		
5	1.716863	Standard Deviation

Question 40D Responses

6	7	
1	4	
4	6	
1	1	4.982143 Mean
2	6	
7	7	2.093202 Standard Deviation
1		
7		
1		
7		
5		
7		
6		
3		
5		
6		
5		
6		
7		
6		
1		
7		
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6		
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5		
6		
1		
4		
1		
4		
5		
4		
7		
5		
7		
6		
4		
7		

Exhibit 4

TABLE OF Q9P1 BY Q31

Q9P1 Q31

Frequency Expected Percent Row Pct Col Pct	1	Total
1	15 15 8.20 100.00 8.20	15 8.20
2	168 168 91.80 100.00 91.80	168 91.80
Total	183 100.00	183 100.00

Frequency Missing = 12

TABLE OF Q9P1 BY Q32

Q9P1 Q32

Frequency Expected Percent Row Pct Col Pct	1	2	3	Total
1	9 6.7127 4.97 60.00 11.11	4 3.9779 2.21 26.67 8.33	2 4.3094 1.10 13.33 3.85	15 8.29
2	72 74.287 39.78 43.37 88.89	44 44.022 24.31 26.51 91.67	50 47.691 27.62 30.12 96.15	166 91.71
Total	81 44.75	48 26.52	52 28.73	181 100.00

Frequency Missing = 14

STATISTICS FOR TABLE OF Q9P1 BY Q32

Statistic	DF	Value	Prob
Chi-Square	2	2.199	0.333
Likelihood Ratio Chi-Square	2	2.433	0.296
Mantel-Haenszel Chi-Square	1	2.154	0.142
Phi Coefficient		0.110	
Contingency Coefficient		0.110	
Cramer's V		0.110	

Effective Sample Size = 181
Frequency Missing = 14
WARNING: 33% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Question 39E Responses

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4
6
6
5
6
5
7
7
2
6
1
5
3
6
6
3
7
5
6
5

5.047619 Mean

1.627151 Standard Deviation

Question 40E Responses

1	4	
1	1	
6	6	
1	5	3.178571 Mean
7	5	
1	4	2.232871 Standard Deviation
1		
1		
1		
1		
4		
6		
3		
5		
1		
2		
6		
7		
6		
7		
1		
2		
1		
1		
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6		
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1		
2		
1		
5		
7		
5		
2		
6		
4		
3		
2		
1		
7		
1		
1		
3		
1		
5		
1		
2		
6		
4		
2		

Question 42 Responses

5	5	
3	5	
1	4	
5	1	
5	3	
5	5	
4	4	
5	4	
5	5	
5	5	
5	4	
5	5	4.4375 Mean
4	4	
4	5	0.906327 Standard Deviation
3		
5		
4		
4		
5		
5		
5		
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Exhibit 5

TABLE OF Q9P1 BY Q4

Q9P1 Q4

Frequency Expected Percent Row Pct Col Pct	1	2	3	Total
1	13 11.066 7.10 86.67 9.63	2 3.3607 1.09 13.33 4.88	0 0.5738 0.00 0.00 0.00	15 8.20
2	122 123.93 66.67 72.62 90.37	39 37.639 21.31 23.21 95.12	7 6.4262 3.83 4.17 100.00	168 91.80
Total	135 73.77	41 22.40	7 3.83	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q4

Statistic	DF	Value	Prob
Chi-Square	2	1.593	0.451
Likelihood Ratio Chi-Square	2	2.242	0.326
Mantel-Haenszel Chi-Square	1	1.585	0.208
Phi Coefficient		0.093	
Contingency Coefficient		0.093	
Cramer's V		0.093	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 33% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF Q9P1 BY Q5

Q9P1 Q5

Frequency Expected Percent Row Pct Col Pct	1	2	3	Total
1	8 7.2527 4.40 53.33 9.09	7 6.2637 3.85 46.67 9.21	0 1.4835 0.00 0.00 0.00	15 8.24
2	80 80.747 43.96 47.90 90.91	69 69.736 37.91 41.32 90.79	18 16.516 9.89 10.78 100.00	167 91.76
Total	88 48.35	76 41.76	18 9.89	182 100.00

Frequency Missing = 13

STATISTICS FOR TABLE OF Q9P1 BY Q5

Statistic	DF	Value	Prob
Chi-Square	2	1.795	0.408
Likelihood Ratio Chi-Square	2	3.269	0.195
Mantel-Haenszel Chi-Square	1	0.828	0.363
Phi Coefficient		0.099	
Contingency Coefficient		0.099	
Cramer's V		0.099	

Effective Sample Size = 182
Frequency Missing = 13

TABLE OF Q9P1 BY Q7

Q9P1 Q7

Frequency Expected Percent Row Pct Col Pct	1	2	Total
1	12 11.066 6.56 80.00 8.89	3 3.9344 1.64 20.00 6.25	15 8.20
2	123 123.93 67.21 73.21 91.11	45 44.066 24.59 26.79 93.75	168 91.80
Total	135 73.77	48 26.23	183 100.00

Frequency Missing = 12

STATISTICS FOR TABLE OF Q9P1 BY Q7

Statistic	DF	Value	Prob
Chi-Square	1	0.328	0.567
Likelihood Ratio Chi-Square	1	0.345	0.557
Continuity Adj. Chi-Square	1	0.071	0.790
Mantel-Haenszel Chi-Square	1	0.326	0.568
Fisher's Exact Test (Left)			0.807
(Right)			0.411
(2-Tail)			0.762
Phi Coefficient		0.042	
Contingency Coefficient		0.042	
Cramer's V		0.042	

Effective Sample Size = 183
Frequency Missing = 12
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Question 39C Responses

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1		
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1		
5		
2		
5		
1		
5		
1		
1	3.333333	Mean
3		
6	1.879716	Standard Deviation

Question 40C Responses

7	4	
7	1	
2	1	3.218182 Mean
4	3	
4	7	2.157596 Standard Deviation
7		
1		
3		
3		
2		
7		
4		
3		
1		
6		
2		
1		
1		
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6		

Question 41 Responses

3	4		
4	4		
3	2		
5	2		
4	4		
4	1		
3	1		
5	4		
3	3		
3	3		
5	1		
5	2	3.125	Mean
2	3		
3	5	1.214986	Standard Deviation
3			
2			
1			
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5			
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